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14 June 1961

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THE ECONOMY OF KIROVSKAYA OBLAST  
AND ITS LONG RANGE DEVELOPMENT

By B. F. Bryukov

-USSR-

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## FOREWORD

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JPRS: 4699

CSO: 1862-S

ECONOMY OF KIROVSKAYA OBLAST AND ITS LONG RANGE DEVELOPMENT

[ Following is the translation of the book Ekonomika Kirovskoy Oblasti i Perspektivy Yeye Razvitiya by B.F. Bryukhov; The Kirov Publishing House, Kirov, 1959, pages 1-72. ]

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On the basis of a decision by the VTsIK (Vserossiyskiy Tsentral'nyy Iсполnitel'nyy Komitet--All-Russian Central Executive Committee) of 7 December 1934 the Kirovskiy kray was detached from the Gor'kovskiy kray and made into a semi-independent unit. It was basically comprised of rayons which prior to 1929 made up the former Vyatskaya guberniya, the Udmurt Autonomous Republic and four rayons of the Sverdlovskaya oblast. On 5 December 1936 the Udmurt Autonomous Socialist Republic was formed out of a portion of the Kirovskiy kray and the kray was renamed an oblast. A number of administrative changes occurred during the existence of the oblast, the most important of which was the addition of the southern rayons--the Sarapul'skiy, Kiyasivskiy, Karakulinskiy and the Votkinskiy rayons to the Udmurt Autonomous Soviet Socialist Republic as well as the annexation of three rayons--the Lal'skiy, Podosinovskiy and Oparinskiy rayons of the Arkhangel'sk oblast to the Kirovskaya oblast. There were also a number of internal changes within the oblast in the course of its existence. The number of rayons decreased to 18 (in connection with an expansion). The cities of Luza, Zuyevka, Muraski, Vyatskiye Polyany, Kirovo-Chepetsk and Novo-Vyatsk grew out of former worker settlements.

The following new worker settlements developed: Strizhi, Krasnyye Polyany, Karintorf, Lesnoy, Sozimskiy, Yur'ya, Falenki and others.

On 1 January 1959 two cities under oblast jurisdiction became a part of the Kirovskaya oblast (Kirov and Slobodskiy), as well as 42 rayons, 14 cities under rayon jurisdiction and 30 worker settlements. The city of Kirov is the administrative, industrial and cultural center of the oblast.

The population of the oblast according to the All-Union census was 1,919 thousand persons on 15 January 1959, including an urban population of 706 thousand and a rural population of 1,213 thousand persons. The population of the oblast center--the city of Kirov--was 252 thousand persons on the same date, and showed an increase of 75% over a period of 20 years.

#### Natural Conditions and Wealth of the Oblast.

Kirovskaya oblast is situated in the northeastern part of the European portion of the Soviet Union, for the most part in the taiga zone and partially in the forest-steppe zone. The extreme points of the oblast are 61°08' N. Lat. on the north (Lal'skiy rayon), 56°03' N. Lat. (Vyatsko-Polyanskiy rayon) on the south, 45°51' E. Long. (Sharangskiy rayon) on the west and 54°04' E. Long. (Zyuzdinskiy rayon) on the east. The oblast extends for approximately 570 kilometers from north to south, which is almost equivalent to the distance

between Moscow and Leningrad. From the west to east the distance between the extreme points of the oblast amounts to approximately 530 kilometers.

The oblast occupies a territory of 121.7 thousand square kilometers, or larger than the territories of many European countries: Austria, Bulgaria, Belgium, Hungary, Denmark, Holland, Portugal, and Switzerland. It is quite understandable that with such a large territory the natural conditions of the oblast are distinguished by great variety.

The surface of the oblast represents an undulating plain, slightly inclined to the southwest. Its highest points are approximately 300 meters above sea level and are located at the watershed of the Vyatka and Kama rivers, while the lowest features of the relief, located in the valley of the Vyatka river in the Vyatsko-Polyanskiy rayon, are 50 meters above sea level.

The northern and northeastern rayons of the oblast--Kayskiy, Nagorskiy, Omutninskiy, Lal'skiy, Podosinovskiy, Oparinskiy and Darovskoy rayons are located on the northern foothills of the Ural mountains, or border on them. In their geological structure the northern foothills represent various glacial deposits covering bedding rock of the Permian and Jurassic periods, and they are composed of thick layers of loam and sand with boulders and scree; some of them consist entirely of pebbles. The terrain relief there is a hilly plain with extensive areas covered by swamps, which are the source of many rivers. The elevated areas that are encountered there consist of glacial deposits and extend in comparatively high hills and chains.

The relief characteristics of the central and southern portion of the Kirovskaya oblast are manifested by a wide chain of elevations, which extend from north to south. This chain, which is approximately 500 kilometers long and from 70 to 80 kilometers wide, is called the Vyatsk chain. The Vyatsk chain crosses rayons that are situated along the middle and lower course of the Vyatka river and along its tributaries: Belaya Kholunitsa, Cheptsa, Bystritsa, Voya, Nemda, Urzhumka and others. The terrain of these rayons is distinguished by its irregular nature; it is covered with a network of ravines and valleys. The rock that forms the surface of the ground in this zone is principally represented by layers of the Permian system. Somewhat deeper Permian layers are found in the basin of the Nemda river, in the lower course of the Pizhma river and along the middle course of the Vyatka river, which in its lower sections consists predominantly of arenaceous limestone and thick layers of argillaceous and arenaceous limestone as well as hard, porous dolomite.

East of the Vyatskiy chain and almost parallel to it, another chain of elevations extends within the borders of the Kayskiy and Zyuzdinskiy rayons, and is called the Glazovskiy chain.

At the lower courses of the Moloma and Velikaya rivers as well as along the left bank of the Vyatka river and in the basin of the Kil'mezi river, the terrain is slightly hilly and forms two broad lowland areas: the Kirovo-Kotel'nichskaya and Kil'mezskaya lowland

areas, which are covered with ancient sand dune formations.

The oblast contains extensive agricultural lands. On 1 November 1958 the oblast included only 2,912 thousand hectares of land under cultivation, as well as 222 thousand hectares of layland and long-fallow land, 868 thousand hectares of hay and 595 thousand hectares of grazing land. Out of these lands some 2,775 thousand hectares of plowland, 217 thousand hectares of layland, 792 thousand hectares of hay and 57 thousand hectares of grazing land were granted to the kolkhozes for perpetual use. It is evident from the data cited above that the oblast contains extensive natural fodder resources--meadows and pasture lands, which create favorable conditions for the development of the meat-dairy cattle breeding.

Soil conditions are of great significance in the development of the agriculture of the oblast.

The mechanical make-up of the soils of this oblast are divided into heavy and average loamy soils, sandy loam and sands. Almost all the varieties of soil are podzolic to a certain degree, since they originated as a result of the soil formation effects of the coniferous forest.

Depending on the degree of the podzol as well as the mechanical composition and the characteristics of the underlying solid rock, the oblast contains some 55 varieties of soil. The territory may be divided into regions on a basis of one or two dominant types of soil.

The first region is the southern one which occupies the southern and southwestern portion of the oblast; on the north and east it is bordered by the Pizhma and Vyatka rivers and is characterized by a predominance of medium-loamy soils with average and slight podzolic content. This region includes the right bank portion of the Vyatsko-Polyanskiy, Malmyzhskiy, Shurminskiy, Urzhumskiy, Lebyazhskiy and Sovetskiy rayons as well as the Yaranskiy, Pizhanskiy, Kiknurskiy, Sharangskiy, Tuzhinskiy, Sanchurskiy and Arbazhskiy rayons.

The second region is the southeastern one, which is situated along the left bank of the Vyatka river up to the border of the Udmurt Autonomous Soviet Socialist Republic and is characterized by the predominance of sandy and sandy-loam soils with light and medium podzolic content. The source rock in this region is quartz sand and products of the erosion of the Permian sandstone. It includes the left bank segments of the Vyatsko-Polyanskiy, Malmyzhskiy, Shurminskiy, Urzhumskiy as well as a part of the Nemskiy and Kil'mezskiy rayons.

The third region is the central one, which is bordered on the north by the Vyatskiy chain and on the south by the Cheptsa river. It is characterized by medium loamy soils over underlying Permian clay and blanket loam. It includes the Sunskoy, Nolinskiy, Orichevskiy, Novo-Vyatskiy, Kumenskiy, Bogorodskiy, and the Uninskiy rayons as well as a part of the Nemskiy, Prosnitskiy, Zuevskiy and Falenskiy rayons.

The fourth region, the western one, which is bordered by the Pizhma river on the south, and by the Vyatka river on the east,

contains many different types of soils, with predominantly clay loamy soil in its northern portion, which developed on glacial deposits. Sandy and sandy loam soils are found predominantly in the southeastern portion of that region which have a strong and a medium podzol content. It includes the Verkhoshizhenskiy rayon, the left bank portion of the Sovetskiy rayon as well as the Kotel'nicheskiy, Svechinskiy, Darovski, Khalturinskiy and the Shablinskiy rayons.

The fifth region (its southern border passes along the Cheptsa river and then through the cities of Slobodskoy, Murygina and the Kobra river) is characterized by the presence of medium and clay loamy soil, strongly podzolised with signs indicated that it is transforming into meadow-marsh and peat soil. This region includes the Slobodskoy, Belokholunitskiy, Omutninskiy, Zyuzdinskiy, Kayskiy, Nagorskiy, Verkhovinskiy, Murashinskiy, Oparinskiy, Podosinovskiy and the Lal'skiy rayons.

From the characteristics of the soil composition it is evident that in order to raise their fertility it is necessary to create a deep homogenous plowed layer fertilized with organic fertilizers, to eliminate the excessive acidity by liming and to introduce a wider application of mineral fertilizers. Ameliorative work should also be done in large areas in order to eliminate excessive soil moisture.

The climatic conditions are of considerable influence on the development of agriculture.

The climate of this oblast is a moderate continental climate. Average July temperatures fluctuate between  $+17.6^{\circ}$  (village of Kay) to  $+19.8^{\circ}$  (the cities of Vyatskiye Polyany), the January temperatures vary from  $-15.2^{\circ}$  (village of Kay) to  $-13.5^{\circ}$  (workers' settlement of Sanchursk).

The vegetative period, which is determined on the basis of dates when the average diurnal temperature of the air rises to  $+5^{\circ}$ , is determined to start from the end of April to 1-7 October and lasts from 155 to 170 days. The period of active growth of the plants lasts from 110 to 130 days.

The oblast is in an area of adequate precipitation. 55%-66% of the overall annual precipitation occurs during the vegetative period. The precipitation, however, is unevenly distributed over the territory of the oblast. The northern and northeastern rayons (the Lal'skiy, Podosinovskiy, Oparinskiy, Kayskiy, Omutninskiy and the Zyuzdinskiy rayons) receive up to 600 millimeters of rain per year, whereas in the south---the Vyatsko-Polyanskiy, Malmyzhskiy and other rayons receive up to 400 millimeters of rain per year. Therefore the southern rayons are subjected to periodic droughts, which is something the northern rayons do not experience at all.

The river system performs an important role in the development of economy in the oblast.

The principal water artery, which cuts through the entire oblast from north to south is the river Vyatka with its numerous tributaries. The river is 1,371 kilometers long from its source to

its mouth. Over 120 tributaries flow into the Vyatka, the biggest ones of which are, on its right, the Kobra, Letka, Velikaya, Moloma, Pizhma, Buy, Urzhumka and Shoshma; and on its left, Chernaya Kholunitsa, Belaya Kholunitsa, Che tsa, Bystritsa, Voya and Kil'mez'.

The Vyatka river flows through 20 rayons of the oblast and is navigable for a distance of 1,013 kilometers. Due to the many rapids at the upper course of the river, this section is navigable for only one to two months a year.

The upper course of the Kama river traverses the northeastern portion of the oblast, which flows through the Zyuzdinskiy and Kayskiy rayons. The Kama river has over 40 significant tributaries within the territory of the Kirovskaya oblast, the largest ones of which are the Porysh and Volosnitsa rivers.

The river Yug and its large tributary--the Luza river, both of which flow into the North Dvina basin, flow in the north of the oblast, in the Lal'skiy, Polosinovskiy, and Oparinskiy rayons.

The Vyatka, Kama, Yug and Luza rivers along with their tributaries are of great significance in the transportation of cargo, especially for floating lumber as well as for fishing.

In a geological sense the oblast has been poorly studied; only approximately one-half of its entire territory has been covered by large scale surveys. Special hydrogeological surveys were conducted only for the city of Kirov. The Kirovskaya Complex Geological Survey Party was established in 1958 in order to study useful minerals, which will have to liquidate the white gaps on the map of this oblast. Its principal task is the location of oil deposits, since according to all available data and a hypothesis offered by Academician Gubkin, the oblast is within the area of a second Baku, and has potential oil reserves.

The geological survey work that was conducted in the oblast established the presence of iron ore deposits, phosphorite, oil shale, limestone, gypsum, potter's clay and clay having a high melting point, mineral springs and other useful minerals. Extensive deposits of peat are of great significance to the development of the oblast's economy.

Iron ore deposits are principally concentrated in the northeastern portion of the oblast, at the upper course of the Vyatka river and its tributaries (Chernaya Kholunitsa, Belaya Kholunitsa, Kobra and Fedorovka), as well as at the upper courses of the Kama river and its tributaries: Lup'ya, Kosa, Lologa, Kolych, Chus, and Syuzva over an area of approximately 15,000 square kilometers. The iron ore deposits are calculated to consist of one billion tons with an average iron content of 33%. With the present day level of technology, however, it is economically unprofitable to mine the ore locally, since the ore is found in separate nests-in veins at a depth of from 15 to 20 meters. Therefore iron ore is no longer mined in the oblast and the ferrous metallurgy industry uses imported raw material and metal scrap.

Phosphorite deposits are also located in the northeastern

part of the oblast in the area of the Vyatsko-Kamskiy watershed and in the Nagorskiy rayon along the right bank of a tributary of the Vyatka river--the Kobra river. The particularly extensive phosphorite deposits of the Vyatsko-Kamskiy watershed are located in the Kayskiy rayon. The overall volume of these deposits is estimated at 2,279 million tons. The Vyatsko-Kamskiy phosphorites are found at a comparatively shallow depth (from one meter); they are easily mined by a means of the open pit method--with excavators and are distinguished by their high quality and content of phosphoric acid--24.5% to 25.5%.

Two deposits of oil shale were found--the Sinegorskiy and Voron'ye-Voloskovskiy, over an area of 257 square kilometers, with reserves with an index above the minimum demanded by industry--some 591.6 million tons, which, converted into terms of standard fuel amounts to approximately 160 million tons.

The Sinegorskiy deposit of shale is situated in the Nagorskiy rayon with a reserve of 269.8 million tons, with a heating capacity of over 2,000 calories per kilogram. The Voron'ye-Voloskovskoye deposit is situated in the former Polomskiy rayon with a reserve of 321.8 million tons with a heating capacity of approximately 1,820 calories per kilogram.

Professor Kassin estimates the overall distribution of shale in the territory of the oblast, to cover an area of 1,500 square kilometers, with layers two to three meters thick, on the basis of descriptions contained in a 107-sheet geological map of the European portion of the USSR; therefore the total reserves of shale amount to 5.6 billion tons.

Limestone is widely distributed over the territory of the Kirovskaya oblast, as well as dolomite limestone and dolomite.

Limestone deposits are primarily found in the elevated zone, known as the Vyatskiy chain (in the Belokholunitskiy, Slobodskiy, Novo-Vyatskiy, Sunskiy, Verkhoshizhenskiy, Sovetskiy, Lebyazhskiy, Urzhumskiy, Malmyzhskiy and Vyatsk -Polyanskiy rayons).

A total of 16 limestone deposits have been found in the oblast, six of which are now under exploitation.

Nine of these deposits were certified by the State Supply Commission.

The total reserve of limestone in terms of rubble was estimated at 44.3 million cubic meters and 15 million tons of limestone rock for processing.

The greatest deposits of limestone in the Sovetskiy rayon are: the Poptsovo-Rodyginskoye with a reserve of 28 million cubic meters, Suvodskoye with a reserve of 4.5 million cubic meters, Zhernovogorskoye with a reserve of 9.3 million cubic meters; in the Slobodskiy rayon: Chirkovskoye--with a reserve of 8.3 million tons, Zhukovskoye--2.45 million tons; in the Belokholunskiy rayon--Podsanov'ye-Rubtsovskoye--1.8 million tons; and in the Vyatsko-Polyanskiy rayon--the Kukmorskoye with a reserve of 577 thousand cubic meters.

Large reserves of cement raw material were revealed in the oblast, in addition to the limestone rubble and lime. The

berestyanskoye deposit in the Sovetskiy rayon contains reserves of nizhnepkazanskiy limestone and quaternary clay in the amount of 43 million tons. After a survey of the neighboring Chembulatoskiy and Borisovski deposits an additional increase in the reserves up to 70 million tons is possible, which assures the building of a cement factory with a capacity of 1 to 1.5 million tons of cement per year. Limestone is widely used in the building materials industry and for the fertilization of acid soils.

Two deposits of gypsum have been discovered in the oblast: the so-called Lebedovo-Zaytsevskoye deposit in the Urzhumskiy rayon with a reserve of 342 thousand tons and the Ugorskoye deposit with a reserve of 2.9 million tons in the Verkhoshizhenskiy rayon. Both deposits are under exploitation, but the production level is insignificant and is far from adequate to satisfy the demands of the oblast's building industry for alabaster.

Heat resistant clays were discovered at the Kokorinskiy deposit in the Omutninskiy rayon with a reserve of 622 thousand tons. The clays are suitable for the manufacture of refractory brick, ceramic sewer pipes and facing tile.

Surveys conducted during recent years have led to the discovery of industrial reserves of anthracite in the Vyatsko-Polyanskiy rayon.

The oblast also contains reserves of brick clay and building sand. The largest deposits of clay were discovered in the Omutninskiy rayon--the Verkhnezdoritskoye and Pribrezovskoye deposits, in the Prosnitskiy rayon--the Limnovskoye and Chepetskoye deposits by the Ivanovskoye lake. The largest deposits of sand are found in the Strizhevskoye deposit at the Orichovski rayon with a reserve of 11.2 million cubic meters and a deposit by the city of Kirov--the Gnusinskoye deposit with a reserve of 19 million cubic meters of sand.

Gravel deposits, a material which is used in roadbuilding and in reinforced concrete projects, are widespread throughout the oblast.

Mineral springs are found in a number of rayons of the oblast. The powerful calcium-sulphate springs by the village of Nizhneye Ivkiyo of the Kumenskiy rayon have been well surveyed and studied. A balneological institution was established on the basis of these springs, which will be developed into a local resort during the Seven Year Plan. Sulphur springs are known to exist in the Sovetskiy rayon by the city of Kichman, in the Sunskiy rayon by the settlements of Mordyl'ov and Smolyata, in the Uninskiy rayon by the village of Ryabovoy and in the Omutninskiy rayon by the Peskovskiy iron mill. The carbon dioxide ferrous spring located by the village of Rogovoye of the Slobodskiy rayon has been known for almost a century.

As already stated the oblast is rich in peat deposits.

Reserves of crumbling peat amount to approximately seven billion cubic meters, or, in terms of air-dried peat--830 million tons.

Out of the 1,893 known peat deposits, some 1,549 deposits over an area of 274 thousand hectares have been surveyed. Of the overall area of peat bog, high bogs cover 23%, transitional swamps cover 19%

and the flood-plain marshes cover 58% of the area. Peat deposits are distributed quite irregularly. The principal peat deposits are located in rayons situated to the north of the Svecha-Kirov-Palenki railway line. A group of northeastern rayons are particularly rich in peat--the Omutninskiy and Kayskiy rayons. One of the marshes in that area, Dymnoye, located in those rayons covers an area of almost 24 thousand hectares and contains a reserve of crumbling peat of over 600 million cubic meters. These same rayons contain the following peat bogs: the Salamat'yevskoye peat bog over an area of 7.2 thousand hectares, the Vishnyatskoye peat bog--an industrial deposit area of 7.9 thousand hectares, as well as other peat bogs. All of these peat areas are almost not used at all by the industry.

Peat is one of the richest kinds of raw material and may be used as fuel both in industry and for homes, as well as for the manufacture of heat and sound insulation materials, as fertilizer, and as bedding for live stock barns. It is a valuable form of raw material for chemical-technological use; after dry distillation it gains a number of qualities that make it preferable to coal and shale. It is possible to obtain durable metallurgical coke out of peat, which exceeds the productivity of blast furnaces by 20-25% and improves the quality of the metal.

The extraction of peat has recently been considerably mechanized, as a result of which the cost of production per ton of standardized quality peat is from 25% to 70% cheaper than coal which is transported over considerable distances to the oblast; coal for the oblast is principally shipped from the Kuznetskiy and Pechorskiy basins.

Within the next few years the utilization of peat as fertilizer should increase considerably. In 1959 the oblast will use over two million tons of peat as fertilizer, and by 1961 it will use over 4.6 million tons for that purpose.

All of this indicates that the extraction of peat for use as fuel and fertilizer during the current Seven Year Plan must be considerably developed.

The wealth of its forests performs a significant role in the industrial development of the oblast. Some 7,014 thousand hectares of land area in the Kirovskaya oblast is under forests, including 5,844 thousand hectares of state forest reserves. Fully mature trees cover 48% of the area, almost mature trees, 10% of the entire area.

The principal forest areas are located in the north and northeast of the oblast. The largest forested areas (over 80%) are found in the following rayons: Omutninskiy, Zyuzdinskiy, Kayskiy, Nagorskiy, Lal'skiy, Podosinovskiy, Oparinskiy and the Murashinskiy rayons. The center and especially the southwestern parts of the oblast contain the least forests. The Pizhanskiy and Yaranskiy rayons contain the smallest areas under forests.

The overall reserve of timber in the state forest reserve is 810 million cubic meters, including 515 million cubic meters of fully

mature and over mature lumber, and 488 million cubic meters of forest working timber. 63% of the overall reserve of forest working timber is workable wood and 37%, firewood. The annual volume of forest working may be raised, without any losses to the forest industry, up to 23 million cubic meters over a period of 40-50 years.

The wood working and timber processing industries must be further developed on a basis of utilizing the timber wealth. The wood working industry in the mechanical and chemical processing of timber in particular, will become intensively developed, since at the present time the predominant portion of the workable wood is exported from the oblast in raw form which leads to an irrational overloading of railroad transportation, whereas a portion of stored timber is not used at all and is destroyed, which in turn brings great losses to the national economy.

This, in general terms, describes the natural conditions that are of great significance in the economic development of the oblast.

The most important factors, which influence the economy, are the geographic distribution and transportation ties of any of the economic rayons. The position of the Kirovskaya oblast must be considered favorable: it is located between the central industrial rayon of the country and the industrial Urals and is tied by railway with Moscow, and Leningrad on one side and with Perm', Sverdlovsk, Siberia and the Far East on the other. The oblast is also tied by direct railroad lines with Arkhangel'sk and Vorkuta on the north.

Within the oblast itself, however, railroad transportation is developed poorly, which reflects unfavorably on industry and agriculture and is a hindrance to the further economic development of the oblast. The network of automobile highways with a perfected surface is also poorly developed.

#### The Historical-Economic Characteristics.

During pre-revolutionary time the Kirovskaya oblast was a backward, vividly expressed agricultural rayon of the country.

The leading branch of the economy was agriculture. Over 95% of the independent population was engaged in agriculture.

A peculiarity of the agriculture of the oblast was the negligible development of the landlord type of land ownership and a predominance of petty households of the peasant type. The arable land belonging to these households amounted to 99.7% of the entire land area, and only 0.3% of the land belonged to the landowner class, whereas in the rest of the European Russia, on the whole, the landowner class had 11% of the arable land, while the households of the peasant type owned 89%.

The value of agricultural production amounted to 60% of overall production.

Grain crops occupied the principal position in agricultural production. Areas under grain crops covered 09.3% of the overall arable land area. Flax production accounted for a comparatively large part of agricultural production: the area under flax covered

6.5% of the overall arable land area.

Even though agriculture was a leading branch, it was still rather retarded. The soil was cultivated with primitive implements--with wooden plows, scythes, and wooden harrows; the three-field system predominated as well as ancient agricultural engineering methods. As a result the crop yield was very low and did not exceed 20-30 puds per hectare.

Animal husbandry accounted for a considerable share of agricultural production, but the cattle in most cases were not thoroughbred and were unproductive.

Large industry, as a result of inadequately developed capitalist relationships, was poorly developed. The per capita share of gross production was only 13 rubles as compared with 73 rubles on the average for all of Russia.

Large industry basically consisted of the light and food industries (the leather footwear, the sheepskin-fur, the fur, the distillation and the soap industries); it was also characterized by an insignificant degree of technological development and a predominance of manual labor.

The Omutninskiy rayon metallurgical industry received considerable development on the basis of local easily fusible ore and wood-coal fuel. As a result of the south Donets metallurgical industry, however, which was developing at that time, it was constantly in a critical state, and by 1917 out of the eight iron mills, only four were in operation--the Omutninskiy, Peskovskiy, Chernokholunskiy and the Kirskinskiy mills.

Petty handicraft industry became developed as an adjunct to the heavy industry. The Vyatskaya guberniya occupied one of the leading positions in all of Russia in the number of handicraft workers. In 1910 there were 632 handicraft workers for every 10,000 persons. V.I. Lenin, in his work entitled "The Development of Capitalism in Russia," wrote that "The Vyatskiy and Slobodskiy uyezds are the centers of both the 'factory-plant' and the leather and fur handicraft production. At the Vyatskiy uyezd the handicraft leather plants are concentrated in the city suburbs, 'supplementing' the industrial activities of the large plants, by working for large factory owners: the handicraft and glue makers also work for them in most of the cases. The fur industry plant owners employ hundreds of handicraft workers who work at home in sewing sheepskins and so on. That is one of the capitalist manufacturing enterprises with the following subdivisions: sheep-skin tanning, sheep-skin garment making, leather saddle making and so on."

The oblast has for a long time been an important producer of timber. The timber industry employed a large number of people. Over 56 thousand workers were engaged in the timber industry in nine of the eleven uyezds of the former Vyatskaya guberniya. The forests were felled in a predatory manner by the timber industry. The forests were felled primarily in the vicinity of inhabited areas, while forest areas distant from transportation (in the northern and north-

eastern parts of the guberniya) remained almost untouched, great volumes of over mature wood accumulated and the forest soils did not produce.

The cultural level of the guberniya was also backward--some 75.6% of the population was illiterate. Only 36.6% of school age children attended elementary schools. There were 46 schools of the higher type and 106 medical doctors for the entire guberniya, including the territories which were annexed to the Mariyskaya and Udmurt Autonomous Socialist Soviet Republics.

This is the past of the Kirovskaya oblast.

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During the period of time which elapsed since the advent of Soviet power radical changes took place in the development of the culture and economy of the oblast.

The Industry. After a considerable deterioration during the years of the imperialist and civil wars, the industry of the oblast was fully restored by 1925-1926. In the course of that period a concentration of industry took place: large technically equipped enterprises were created on a basis of the petty handicraft and semi-handicraft enterprises. Two large leather-footwear plants imeni Lenina and imeni Komintern, for instance, were established on the basis of eight petty semi-handicraft tanneries. Four paper and cardboard mills were preserved and reconstructed out of seven mills of low productivity; the new mills are the Lal'skaya, Koskinskaya, "Krasnyy Kursant" and the Kordyazhskaya mills. Enterprises of the match industry were also reconstructed. The former Vyatskiye railroad workshops were re-equipped in a radical manner and a machine building plant imeni 1 Maya was established on the basis of those workshops. The Omutninskiy metallurgical plant, the "Belka" fur plant and other enterprises were re-equipped. As a result by 1927-1928 the volume of production of the big industry was twice as high as the level attained in 1913.

During the years of the early Five Year Plans, as a result of the implementation of a policy for the industrialization of the country, the industry of the oblast was developing at a growing tempo.

In that period of time the building of new enterprises became developed. The largest of them were: combine supplying educational-technical school aids, the artificial leather combine--"Iskozkh"--a match factory--"Krasnaya Zvezda"--a meat combine, a bread bakery combine in the city of Kirov, the Verkhne-Kamskiy phosphorite mine and a cellulose plant in the Kayskiy rayon, a plywood plant "Krasnyy Yakor" in the city of Slobodskiy, the Sosnovskaya shipbuilding wharf and a spool and reel plant in the Vyatsko-Polyanskiy rayon.

Many new branches of industry developed, including those in metal working, shipbuilding, in the peat industry, as well as plywood and cellulose production in addition to others.

In 1940 the gross industrial production was more than ten times greater than the volume of production during the pre-revolutionary

period.

The oblast's industry occupied one of the leading positions in the Soviet Union in the production of certain individual types of products. In the manufacture of heavy duty footwear, for instance, it accounted for 20% of the total production of that type in the Soviet Union, plastic leather --26%, educational-technical school aids--25%, and in fur products--14%.

A leading place in the output of industrial production, however, was occupied by branches of the light industry--the footwear, leather, fur and food industries. They accounted for 64% of the production and the industry manufacturing the means for production accounted for 36% of gross production.

The industry of the Kirovskaya oblast developed at a particularly tumultuous rate during the years of the Great Patriotic War and especially so during the postwar years.

During the Patriotic War a number of large machine building and metal working plants were evacuated into our area, in addition to a cord and a ski plant, two glove factories, as well as a sledge building, a tire and a cable factory. Large new enterprises were built while the existing ones were re-equipped. As a result many new branches developed in the oblast, primarily those of the heavy industry.

During the postwar period the following enterprises were placed into operation: the Kirovskiy plant for the processing of non-ferrous metals, the Strizhevskiy plant for the manufacture of silicate brick, the Vyatsko-Polinskiy house building combine and the Kirovskiy mechanical plant, the Zenginskoye and Prokop'yevskoye peat enterprises, the Slobodskaya macaroni factory, three bread combines, a number of creameries, vegetable drying, wood working and brick local enterprises. The Kirinskiy cable and the Kirovskiy tire plants and the cord factory as well as a number of other enterprises were reconstructed.

During these years the enterprises of the oblast mastered the manufacture of a number of new products: electric cable, special purpose motors, railroad cranes, tractor drawn harrows, horse drawn dusters, cutter-blowers, hoisting-transportation equipment, electric cars, rolling of non-ferrous metals, galvanized metal pots and pans, standardized houses, wood-fiber tiles, measuring equipment and instruments, preassembled reinforced concrete structures and parts, concrete and silicate blocks for walls, adding machines, rubber footwear, pianos, macaroni, new types of wood working lathes, sewn products, furniture, toys, and electric appliances for the consumer. The output of all basic types of products that were formerly manufactured increased considerably.

Extensive changes are also taking place in the structure of industrial production as well. The industry which manufactures the means for production attained a leading position. It accounts for 56% of the entire output of industry which is under the jurisdiction of the Kirovskiy sovnarkhoz.

In 1958 the volume of gross industrial production in the oblast amounted to over 9.2 billion rubles, thereby surpassing the level attained in 1940 by more than nine times and the level attained in 1913 by more than 108 times, i.e. at the present time over a period of three to four days the industry produces as much as was produced in a year during the pre-revolutionary period.

The production of electric power increased 130 times by comparison with 1917 and the per capita consumption of electric power increased by 140 times.

During the years of the Soviet government, the cost of basic industrial funds increased considerably. Over the period from 1940-1955 the basic industrial production funds increased almost eightfold.

At the present time the oblast contains 2,049 large and small state enterprises, 90 producer cooperative artels and 553 consumer cooperative enterprises.

Concrete changes also occurred in the distribution of industry of the territory of the oblast.

During the pre-revolutionary times industry was concentrated around a few centers: in the cities of Vyatka, Slobodskiy and Omutninskiy.

At the present time the city of Kirov is a large industrial center with predominantly machine building and metal working enterprises.

The city of Slobodskiy contains enterprises of the light industry. Fur production occupies a place of importance there, as well as the leather-footwear, match making, wood working and the building material industries.

The Omutninskiy rayon has for a long time been a center of the ferrous metallurgy industry. At the present time the cable production, metal working, the timber and wood working industries have become well developed there.

The Lal'skiy rayon contains a paper mill and some wood working industries.

Large industrial centers developed at Novo-Vyatskiy, Kayskiy and the Prosnitskiy rayons.

The Viatsko-Polyanskiy rayon contains woodworking and metal working enterprises as well as a house building combine.

Wood working and metal working enterprises are operating at the city of Novo-Vyatsk.

The Prosnitskiy rayon includes one of the largest thermoelectric power plants in the oblast (Thermoelectric Plant No. 3), as well as large peat enterprises.

Phosphorite ore is extracted at the Kayskiy rayon, where it also undergoes preliminary processing. There are also enterprises for the production of cellulose and an extensive logging industry.

A wood working, food, and knitwear industries as well as the production of brick and shingle are developing in the city of Kotel'nich.

The building of new and the reconstruction of existing enterprises, the equipment of them with new technology all created

conditions for an accelerated tempo of increase in the productivity of labor. The productivity of labor from 1940 to 1957 increased more than fourfold in the industrial field. For 1958 the productivity increased by 7% at the sovmarkhoz enterprises, and by 11% in the local Soviet industries. Cadres of highly skilled specialists, progressive workers and production innovators increased in number.

Therefore the oblast started 1959--the beginning of the Seven Year Plan--with a multilaterally developed industry, which manufactures the most variegated products: steel, rolled ferrous and non-ferrous metals, wood working lathes, adding machines, hoisting-transportation machinery, agricultural machinery, electric cables, special purpose motors, spare parts for tractors and agricultural machines, electric instruments, a measuring instrument, electrical engineering products, aluminum and galvanized iron pots and pans, beds, phosphorite dust, automobile tires, timber, plywood, cellulose, paper, matches, products of the dry distillation of wood, standardized homes, skis, leather, flax and rubber footwear, fur clothing, knitwear, sewn products, musical instruments (pianos, accordions, harmonicas), building materials as well as various food products.

The oblast became an independent administrative economic rayon, with the organization of a sovmarkhoz within the oblast.

Agriculture. The years of the First World War and the Civil War, the economic devastation brought about by them, the drought that occurred in 1921 all brought about a great decline in the agriculture of the oblast.

The area under crops decreased by 54% in 1922 as compared with 1913, the grain crop yield decreased significantly and amounted to only 2.5 centners per hectare.

Cattle breeding also declined sharply. In 1922 the number of head of large horned cattle decreased by 45.8% as compared with 1916, and the number of hogs dropped by 80.4%.

The nationalization of land, the restriction of kulaks, the extensive aid provided by the state especially to the poor households, all created conditions for a rapid restoration of agriculture. By 1926 the areas under crops increased by 98.2% on the whole for the oblast, as compared with 1916, including the area under grain crops--by 95.8%, industrial crops--by 111.6%, other crops--716.7%.

There was also a certain improvement in the level of agricultural engineering practiced by the peasant households: multiple crop rotation was introduced, as well as early fallow, fall plowing, a greater number of the simplest agricultural machines was put into use--plows, thrashers, seeders, harvesters, hay mowers and other equipment.

All this resulted in a certain increase in the crop yield.

The grain crop yield, by 1926, was as follows: rye--5.6 centners per hectare, oats--8.1 centners, barley--8.8 centners and wheat--7.3 centners per hectare.

The scattered peasant farms, however, were unable to utilize

conditions that were available for the development of agricultural production; they were unable to establish a high ratio of commodity production to the total output. Only the collectivization of agriculture assured a true upsurge and a high ratio of commodity production to the total output in agriculture. In 1923 the oblast had 942 agricultural cooperatives, and in 1925-1929 it included approximately two thousand agricultural and dairy artels, as well as agricultural, meliorative, machine, credit and other associations, which provided the conditions necessary for transferring to higher forms--to collective farms.

The collectivization of agriculture, on the basis of the Lenin cooperative plan, which was initiated in the oblast as well as in the rest of the country, during the years of the First Five Year Plan, was basically completed during the Second Five Year Plan. By the end of 1940 some 10,598 kolkhozes, which were granted 5,446 thousand hectares of land, were created out of the hundreds of thousands of peasant farms in the oblast.

Along with the growth of the kolkhozes, they were also being consolidated in the production and organizational-economic sense.

The level of agricultural technology was raised. In 1940 63.7% of the arable land was turned over as early fallow, 81.2% of the area under wheat was sown with high grade wheat seed, 92.8% of the area under flax was sown with fiber flax, and 13.9% of the arable land was planted with potato crops.

The application of manure and mineral fertilizers on the fields also increased.

Some 84 Machine Tractor Stations were established in the oblast during 1941 in order to mechanize the kolkhozes. They had 6,200 tractors (rated at 15 horse power) as well as 1,051 combines (in terms of 15 foot units).

All this was conducive to a higher crop yield. In 1940 the grain harvest amounted to 12.2 centners per hectare, flax fiber--2.5 centners and potato--108 centners per hectare.

The ratio of commodity production to the total output in agriculture showed an increase. In 1940 over 400 thousand tons of grain and a large volume of other agricultural produce was delivered to the state.

The oblast transformed from a consumers' region into a producing one.

The war time period from 1941-1945 temporarily halted the development of agriculture. During the postwar Five Year Plans it developed in an unsatisfactory manner.

Serious deficiencies and errors in the management of agriculture, which led to a backwardness in many of its branches, were revealed at the September 1953 Plenum and at the subsequent Plenums of the Central Committee CPSU.

The party and government introduced measures designed to achieve a sharp upsurge in agriculture.

In struggling for the fulfillment of the measures, developed

by the party and the government for a sharp upsurge in agriculture, the toilers of the kolkhozes and Machine Tractor Stations of the Kirovskaya oblast attained a significant rise in the output of agricultural products.

In 1940 the oblast fulfilled the grain delivery plan ahead of schedule. It delivered 22 million puds of grain to the government. The kolkhozes supplied themselves with grain. Some 17 thousand tons of fiber-flax was delivered to the state, three times more than in 1953.

The number of millionaire kolkhozes is growing with every year. There were 254 such kolkhozes in 1957 as compared with 150 in 1956.

In recognition of the successes attained in the development of agriculture in the oblast and in accordance with a decree of the Presidium of the Supreme Soviet USSR of 24 April 1958, the following awards and decorations were made: P.A. Prozorov, Hero of Socialist Labor, chairman of the kolkhoz "Krasnyy Oktyabr;" of the Kumenskiy rayon, was awarded a second gold "Hammer and Sickle" medal; M.A. Vasil'kova, a team leader of the "Pamyat' Kuybysheva" kolkhoz, of the Shabalinskiy rayon, was awarded the title of Hero of Socialist Labor and decorated with the "Order of Lenin" and the gold "Hammer and Sickle" medal; A.M. Koshchevaya--a milkmaid from the "Sokolovka" sovkhov of the Zuyevskiy rayon, A.D. Ovechkin--chairman of the "Trud" kolkhoz, of the Slobodskiy rayon, Ye. M. Rubtsova--milkmaid from the "Udarnik" kolkhoz, of the Nolinskiy rayon, A.M. Ronzhin--chairman of the "Iskra" kolkhoz of the Kotel'nicheskiy rayon, V.A. Shushkanov--director of the "Mukhinskiy" sovkhov, of the Zuyevskiy rayon were all also awarded the title of Hero of Socialist Labor and decorated with the "Order of Lenin" and a gold "Hammer and Sickle" medal. A large group of kolkhoz workers, Machine Tractor Station workers as well as party, soviet, komsomol and agricultural organs were decorated with orders and medals of the USSR. 42 persons were decorated with the "Order of Lenin," with the "Order of the Red Banner of Labor"--145 persons, with the "Badge of Honor"--406 persons, with the medal "For Outstanding Labor"--447 persons.

One of the measures conducive to a more rational utilization of technology, manpower resources, and the creation of large multi-branch farms was the expansion of the kolkhozes. Before the expansion the oblast had 9,150 kolkhozes. Every one of them included an average of only 291 hectares of plowed land and 29,000 rubles of financial income. On 1 January 1959 the oblast had 770 kolkhozes and on 1 May 1959--564 kolkhozes. Every kolkhoz now has an average of 4,920 hectares of plowed land and two million rubles of financial income.

Considerable aid to agriculture was extended by skilled cadres. Approximately five thousand specialists with a higher and secondary education and over 900 persons from party and the soviet aktivs were sent from cities and rayon centers for work at the Machine Tractor Stations and the kolkhozes. Most of them became good organizers of

agricultural production.

In accordance with a decision of the February (1958) Plenum of the Central Committee CPSU and the law "On the Reorganization of the Machine Tractor Stations and the Sale of Machinery to the Kolkhozes" adopted by a session of the Supreme Soviet USSR, the Technical and Repair Stations and the Machine Tractor Stations sold the kolkhozes the equipment in their possession on 1 April 1959, which consisted of 7,537 tractors of all brands, 4,916 combines, 7,418 tractor drawn plows, 7,332 seeders in addition to other agricultural machinery for a total sum of 217.4 million rubles. On 1 January 1959 the kolkhozes had 14,852 tractors rated at 15 horse power. 12,000 mechanics and 867 engineers and technicians transferred for work at the kolkhozes.

The level of mechanization in agricultural work showed a sharp rise. In 1958 7,573 thousand hectares of land (in terms of soft plowing) were plowed by mechanical means, of which 2,677 thousand hectares were plowed by the Machine Tractor Stations and the Technical and Repair Stations and 4,896 thousand hectares were plowed by the kolkhozes themselves. The rise in the level of mechanization in agricultural work during 1958, as compared with the prewar 1940, is shown in the following table:

The Level of Mechanization in % to the Total Volume of Work

	1940	1958
Turning fallow land over	62	100
Plowing for winter fallow	62	99
The sowing of spring grain crops	10	77
Sowing of flax	1	64
Sowing of potatoes	--	38
Sowing of winter grain crops	15	98
Grain harvests	4	89
Flax harvests	10	48
Potato harvests	--	34

In order to conduct meliorative work at the kolkhozes as well as for the extraction of peat and lime, the Technical and Repair

Stations have 37 excavators, 39 bulldozers, 10 graders in addition to other digging machines.

Extensive work was accomplished in the electrification of agriculture. Some 561 electric power plants, with a combined power of 18,655 kilowatts were constructed at the kolkhozes; 89 kolkhozes were connected to state power networks; for that purpose 2.8 thousand kilometers of high tension and 5.4 thousand kilometers of low tension power transmission lines were constructed. On 1 January 1959 the kolkhozes had 6.2 thousand electric motors, with a total power of 34.4 thousand kilowatts. In 1958 the kolkhozes received 29.3 million kilowatt hours of electric power, 18.4 million kilowatt hours of which were generated by kolkhoz and inter-kolkhoz electric power plants. The kolkhozes of the Prosnitskiy rayon have been fully electrified, in seven rayons electrification is nearing completion and there are only four rayons where less than 25% of the total number of kolkhozes in each rayon are electrified: at the Zyuzdinskiy rayon--12%, at the Uninskiy rayon--18%, at the Tuzhinskiy rayon--22% and at the Svechinskiy rayon--23%.

Due to the measures that were conducted after the September (1953) Plenum of the Central Committee COSU, in the organizational-economic consolidation of the kolkhozes, the provision of them with advanced technology and an increase in the material interest of the kolkhozes and kolkhoz workers in the results of their labors, a sharp rise in the output of agricultural products along with a considerable increase in the financial incomes of the kolkhozes was assured. Particular successes were achieved in the development of communal cattle breeding, which is graphically illustrated by the following figures:

	1953	1958	1958 in % to 1953
Number of head of cattle at the kolkhozes at the end of the corresponding year (thousand head)			
Large horned cattle	250	350	140
Including cows	96.6	134	140
Hogs	165.2	205.8	125
The output of livestock products during the year			
Milk (thousand tons)	73.7	260	by 3.4 times
Meat (thousand tons)	24.4	48.5	by 2 times
Eggs (million)	12.6	15	120

The kolkhozes became very profitable organizations and in 1958 sold 41 thousand tons of cattle (in live weight) to the state, as well as 188 thousand tons of milk, 16 million eggs and 733 tons of wool. The sale of cattle by the kolkhozes increased 3.3 times, the sale of milk--3.6 times, the sale of eggs by 76% and the sale of wool by 7% as compared with 1953.

The financial incomes of the kolkhozes for 1958 amounted to 1 billion 124 million rubles, i.e. it increased almost fourfold over a period of five years.

#### A Rise in the Material and Cultural Levels of the Population of the Oblast.

The expansion of industry and agriculture assured a rise in the material welfare and the cultural level of the oblast's population.

The financial incomes of the population in the form of wages, pensions, aids and free services by the government increased along with the incomes of the kolkhoz members and kolkhozes derived from the sale of agricultural produce to the state.

The professional, office and industrial worker's wage fund increased 5.3 times in 1958 as compared with 1940. After the adoption of the new law pensions increased 1.8 times in 1958 as compared with 1955.

The financial remuneration of the kolkhoz workers per work day increased 6.4 times as compared with 1953.

Along with a rise in financial incomes the state cooperative trade was also developing, the commodity turnover of retail trade and communal feeding were expanding. The commodity turnover volume increased 4.7 times in 1958 by comparison with the prewar year (from 1,124.8 million rubles to 5,278.9 million rubles).

The everyday life of the population changed beyond recognition. An extensive building of dwellings was conducted in the cities and workers' settlements, and electrification was fully completed. Considerable work was done in the building of waterworks, sewer systems, and asphalt roads. Trolley and motor bus service was established in the city of Kirov. Most of the cities and rayon centers are connected by regular bus service and air transportation.

The number of general education and worker and rural youth schools is growing with every year. At the beginning of the 1958/59 school year the oblast had 2,225 schools, including 780 seven year and secondary schools. The number of students attending these schools numbers 257.2 thousand persons; and the number of students in their eighth to tenth year of school increased almost twofold as compared with 1940. Three boarding schools were organized, with 1,140 students. The workers' and rural youth schools are attended by 11.7 thousand persons, who are studying without leaving their jobs. The city of Kirov has a correspondence secondary school; some 1,400 persons are studying there.

In order to train cadres for industry, agriculture and social-

cultural institutions, the oblast has a network of special higher and secondary educational institutions, as well as trade and railroad labor reserve schools. Over seven thousand persons including those taking correspondence courses are studying at the higher educational institutions of the oblast--the pedagogical and agricultural institutes. In addition to that branches of the All-Union Institute of Power Engineering, the Institute of Light Industry and counseling centers of the forest husbandry and law institutes are operating in the city of Kirov.

There are 28 secondary specialized educational institutions in the oblast, including six industrial, eight agricultural, seven medical, three pedagogical, three cultural-educational, and one cooperative educational institution. They are attended by approximately 14 thousand persons (including correspondence students).

During the years of the postwar Five Year Plans the higher and secondary specialized educational institutions of the oblast trained over 35 thousand specialists.

At the present time the oblast has 35 labor reserve educational institutions, including nine schools conducting courses in the mechanization of agriculture, nine factory schools, and seven building trade schools. Over a period of 18 years they have trained up to 120 thousand skilled young workers.

Pre-school education was widely developed. The oblast has 506 kindergartens, which service 32,905 children.

A large network of cultural-educational institutions was established.

The oblast has 1,818 clubs, including 62 Houses of Culture, 1,104 rural clubs and library-huts as well as 345 kolkhoz clubs.

The number of public libraries increased to 1,889 in the oblast, the book pool amounts to over eight million volumes. The library imeni Gertsena is one of the largest libraries of the Russian Federation. It has a book pool of 1,100 volumes; it annually services over 27 thousand readers of the city and oblast with its books, and lends them up to 900 thousand books.

There are three theaters in the city of Kirov: the Oblast Dramatic Theater imeni S.M. Kirova, the Theater of the Young Spectator imeni N. Ostrovskogo and a puppet theater.

The oblast has 15 musical schools which are attended by over 1,000 persons, and a conservatory with 130 students.

The network of movie theaters also expanded. At the present time there are 870 movie theaters, including 109 movie theaters in cities, 206 movie theaters in rural areas and 544 mobile movie theaters.

One of the most vivid indications of cultural growth is the press. During the pre-revolutionary period there were five newspapers with a circulation of seven thousand published in the Vyatskaya guberniya. The Kirovskaya oblast publishes two oblast, and 42 rayon newspapers as well as 25 trade newspapers at the larger enterprises,

the institutes and kolkhozes with a total circulation of approximately 285 thousand copies.

Radio performs a significant role in the development of socialist culture and the introduction of the workers to it. The first radio transmissions in the Kirovskaya oblast were organized in 1925. At the present time there are over 224 thousand relay points and 58 thousand radio receivers. Radio has become a definite part of the daily lives of the workers.

Radical changes have also occurred in the matter of public health. Hospital service has both improved and expanded. The number of hospital beds (not counting railway hospital cars) increased from 1,550 in 1913 to 13,635 in 1958.

The cities of the oblast contain five first aid stations. Air ambulance service was organized within the oblast.

The medical institutions of the oblast are every year supplemented with modern instruments, diagnostic and treatment equipment and apparatus. All of the rayon and many of the area hospitals are equipped with X-ray equipment. Many of the hospitals have electrocardiographic apparatus, X-ray as well as mud therapy and balneotherapy are used.

New effective drugs are used in medical practice, as a result of which the death rate from many diseases is rapidly decreasing.

116 trachomatous medical points have been placed into operation in order to combat trachoma. There are 15 various sanatoriums for 1,755 patients.

Institutions engaged in the care and treatment of mothers and infants expanded considerably. The network of maternity homes and clinics for children's and women's diseases as well as children's hospitals and infant nurseries is growing. The number of places available at the nurseries increased by 73% as compared with the pre-war number and amounted to 10,806 in 1958. In addition to that a network of seasonal children's institutions are organized during the summer months for the children of pre-school age. They serve up to five thousand children daily.

Ten children's homes were organized with room for 640 children.

A mothers' and infants' home was opened in the city of Kirov; it can accommodate 30 mothers with infants.

There is an increase in the number of doctors and medical workers of secondary qualifications. In 1929 there were 247 doctors in the oblast and 641 persons in the secondary medical personnel category, whereas in 1958 there were 1,778 doctors and more than 10,000 persons in the secondary medical personnel category.

#### The Seven Year Plan of the Kirovskaya Oblast.

The resolution of the 21st Congress of the CPSU, made in accordance with a report by comrade N.S. Khrushchev entitled: "On the Control Figures on the Development of the National Economy of the USSR for 1959-1965" states: "The Soviet Union, which led the way to socialism, has at the present time attained a level of productive

forces, socialist production relationships and cultural level that permits a wide scale development in the building of a communist society in the forthcoming seven year period."

This deduction made by the 21st Congress of the CPSU, on a basis of multilateral analysis of the development of the economy and culture of the Soviet Union, is quite applicable to the Kirovskaya oblast, which approached the beginning of the Seven Year Plan with a well developed industry, a large mechanized system of agriculture and with considerable successes that it attained in the improvement of the material and cultural levels of the population.

On the basis of the brief description of natural conditions, resources, the development of culture and economy of the oblast that was given above, it is possible to conclude that it possesses great reserves and possibilities for a further expansion.

As a result of that, the Seven Year Plan for 1959-1965 stipulates the following development of the oblast's economy.

#### Industry.

The development of industry within the oblast during the seven year period is planned in accordance with a directive of the 21st Congress CPSU regarding the complex development of the economic rayons on a basis of the most effective utilization of natural resources, with a consideration for the most rational forms of specialization of enterprises, an improvement in the cooperativized relationships between the enterprises and the economic rayons, as well as a liquidation of irrational shipments.

The further growth of industrial production in the oblast is stipulated on the basis of:

First of all, a reconstruction, expansion and a technical re-equipment of the operating enterprises, as well as the renovation and modernization of their equipment, which will permit to resolve the task of increasing the output of production and an increase in the productivity of labor with fewer expenditures and faster than with the construction of new enterprises;

In the second place, on a basis of drawing in the local raw material resources into industrial production, primarily those of timber, phosphorites, lime and agricultural produce: flax, potatoes, milk and meat;

In the third place, on a basis of developing the production of industrial and food commodities, which are not transportable and are necessary for the satisfaction of the demands of the economy and the population of the oblast: sewn products, knitwear, cultural and household items, non-alcoholic drinks and beer, pastry, macaroni and bread products and local building materials.

Considerable possibilities for increasing the volume of industrial production are inherent in a better utilization of the existing production capacities, the specialization of enterprises, as well as the mechanization and automation of production processes.

The State planning Commission RSFSR, through its control figures, is outlining a 70% expansion in gross industrial production in the oblast as compared with 1958, and an expansion of 65% in the sovnarkhoz industry.

The average annual increase in gross industrial production of the oblast will be 7.9%.

Over 70% of the volume of industrial production is accounted for by the sovnarkhoz enterprises. Therefore the industrial development of the oblast is basically determined by the rate of development of the sovnarkhoz industry. The control figures outline the following tempos of the expansion of gross industrial production of the various branches of sovnarkhoz industry as compared with 1958:

Ferrous metallurgy . . . . .	1.3 times
Non-ferrous metallurgy . . . . .	2.4 times
The generation of electric power and heat . . . . .	2.2 times
The peat industry . . . . .	1.4 times
Machine building and metal working . . . . .	1.7 times
Electrical machinery building . . . . .	1.8 times
The chemical industry . . . . .	1.2 times
Timber, paper and wood working industry . . . . .	1.8 times
The building materials industry . . . . .	3.0 times
The light industry . . . . .	1.4 times
Including the textile industry . . . . .	2.5 times
The food industry . . . . .	1.8 times

Some 20% more steel will be smelted in 1965 than during 1958, and 2.5 times more non-ferrous metal will be rolled than during 1958.

The metal working and machine building industry of the oblast will produce 600 railroad cranes by the end of the Seven Year Plan, or twice as many as during 1958; low power electric motors--83% more, low voltage electrical apparatus--eight times more, cable products--84% more, instruments, and means of automation as well as spare parts for that equipment--2.25 times more, including computers and adding machines--4.6 times more, special purpose electric motors--3 times more, centrifugal pumps--2.8 times more, and hoisting-transportation machinery--1.5 times more than the number produced during 1958. The production of electric light bulbs will be re-established; some 65 million bulbs will be manufactured during 1965.

The tempos of the development of the metallurgical and metal working industry stipulated by the Seven Year Plan are principally planned on the basis of an expansion and reconstruction of the existing enterprises. It is planned to construct a new rolling shop at the Kirovskiy non-ferrous metal processing plant. A new steel smelting shop is nearing completion at the machine building plant imeni 1 Maya. The production capacity of the Kirsinskiy cable plant is being doubled as a result of reconstruction.

It is planned to increase the extraction of phosphorites and to increase the production of phosphorite dust to 300 thousand tons

or by 80% more than the 1958 levels at the Verkhne-Kamskiy phosphorite mine, by taking into consideration the large reserves of phosphorites and their high quality.

Wood chemistry will be considerably developed during the Seven Year Plan. Construction of the Molomskiy wood chemical plant at the Al'mezh railroad of the Gorovskaya railroad line. The plant will manufacture, by means of dry distillation, some 150 thousand cubic meters of firewood, 2.4 thousand tons of acetic acid and 15 thousand tons of charcoal. It is planned to construct a second wood chemical plant with the same capacity in the village of Chernaya Kholunitsa of the Omutninskiy rayon, as well as a third plant--the Kobrinskiy plant, the construction of which will start towards the end of the Seven Year Plan.

It is also planned to construct a hydrolytic-furfural plant which will utilize the by-products of the wood working industry. Furfural is an organic compound, which is condensed with phenol, forming resin-like products, which are useful in the manufacture of plastics and is also used in the oil industry as a solvent in the refining of oil and in the production of nylon.

It is planned to construct a plant in the city of Kirovo-Cheptskoye for the production of the most varied assortment of plastic articles for the population and the industry of the oblast.

The construction and expansion of enterprises of the chemical industry will result in an expanded production of synthetic resins--by 10 times, in the course of the Seven Year Plan.

Considerable prospectives are opening up before the wood working and paper industry of the oblast. The existence of large wooded areas in the northern rayons, the major portion of which have not yet been touched by man, will permit the further development of the logging industry. The general expansion of logging and the shipment of timber will reach 20-21 million cubic meters in 1965 as compared with 16.4 million cubic meters in 1958, which will constitute an increase of approximately 20%.

The most important task during the Seven Year Plan will be the shift of the logging enterprises from the southern, thinly wooded rayons of the oblast, to the northern rayons, which contain large reserves of mature and over-ripe timber. Logging enterprises with an annual shipment capacity of 8.3 million cubic meters of timber must be established in the course of the Seven Year Plan. For that purpose wide gauge railway lines will be built: the Kaysko-Gainskaya and the Kobrinskaya railways with a total length of 258 kilometers, as well as the Syuzvinskaya, Zalazinskaya, Perevinskaya, Oparinskaya, and Pinyug-Pushminskaya narrow gauge railroads, as well as a number of motor vehicle logging roads.

The logging industry will be supplied with the greatest variety of technical equipment in order to insure a complex mechanization of felling, skidding, hauling and loading of timber by the end of the Seven Year Plan. This should yield an increase in the output of each worker in the hauling of timber from 328 to 517 cubic meters per year,

or an increase in the productivity of labor of the loggers of almost 58%.

At the present time the major part of the timber is shipped beyond the borders of the oblast as round, unprocessed timber. It is known that in the processing of timber and the manufacture of various products out of the wood more than half of the timber is left as by-products.

An urgent task is the full scale development of a mechanical system for processing wood in order to relieve the transportation facilities from irrational shipments, and to utilize the by-products of the wood working industry for the manufacture of articles necessary in the national economy.

In the northern rayons of the oblast, particularly in the Kobrinskiy and Molomskiy forest areas, over 50% of the timber reserves consist of deciduous types of trees (birch and aspen) which are at the present time left standing in the felling areas and perish in large numbers. The workers of the timber and wood working industry of the oblast should find methods for using all of the deciduous timber in industry, including its use as firewood, the production of which is growing in the course of the Seven Year Plan and its use as fuel is sharply decreasing.

Standardized home building as well as the plywood, furniture, sawed wood, skis, paper and other products of mechanized processing of timber will be especially developed. The by-products of the wood working enterprises will be widely used for the manufacture of wood-fiber and wood-sawdust tiles, fibrolite, coniferous dust, nutrient yeast and other valuable products.

Over 2 billion 300 million rubles will be spent as centralized capital investments in the timber, wood working and paper industry of the oblast--more than one-third of all of the capital investments made in the industry of the oblast.

The capacity of the sawmills will be increased during the seven year period by over 1 million 140 thousand cubic meters of timber, in the building of standardized homes--by 1 million 200 thousand square meters of living area, in the production of 38 thousand tons of paper, in the production of furniture in the amount of approximately 300 rubles, in the production of 350 thousand pairs of skis, 15 million square meters of wood-fiber tiles, and in the manufacture of 28 thousand cubic meters of glued plywood.

During the seven year period the Verkne-Kamskiy saw mill combine with a capacity of 300 thousand cubic meters of lumber; the Podosinovskiy of standardized homebuilding with a capacity of 300 thousand square meters of living area and 140 thousand cubic meters of timber; the Omutninskiy homebuilding combine, which will produce 200 thousand square meters of dwellings, 100 thousand cubic meters of fibrolite and 140 thousand cubic meters of timber per year will be rebuilt and placed into operation during the seven year period. Extensive work will be accomplished in the reconstruction and expansion of the Vyatsko-Polyanskiy homebuilding combine and of the Novo-

Vyatskiy and Luzskiy timber mills. These enterprises will manufacture essentially standardized homes, fibrolite and timber.

In order to increase the output of furniture two large furniture factories will be constructed under the sovmarkhoz jurisdiction and three plants--the Sadovskaya, Khalturinskaya and Zuyevskaya plants--as a part of the local industry. In addition to that it is planned to construct a furniture shop for the manufacture of furniture in the amount of 32 million rubles at the wood combine no. 1 in the city of Novo-Vyatsk. The production of wood-pulp tiles will also be organized at that plant and the manufacture of skis will be expanded to 350 thousand pair a year. The Slobodskiy plywood factory, which is engaged in the manufacture of both plywood and wood pulp tiles, is being considerably expanded, in addition to a number of enterprises of oblast and rayon jurisdiction.

Some 117 million rubles will be invested into the reconstruction and expansion of the "Krasnyy Kursant" paper mill; its production capacity will be increased by 24 thousand tons of paper. Over 50 million rubles is being invested into the expansion of the cellulose plant No. 4 in the Kayskiy rayon, which will permit it to produce 3.5 thousand more tons of cellulose per year, and will also allow the construction of a new paper mill there with a capacity of 14 thousand tons of paper per year.

The fulfillment of the capital construction plan outlined for the Seven Year Plan requires an accelerated tempo of development of the building material industry. Taking this into consideration, it is planned to raise the production of building materials threefold by the end of the Seven Year Plan as compared with 1958. The production of wall materials will be increased two fold and raised to 400 thousand standardized bricks. The sovmarkhoz enterprises will manufacture up to 328 million bricks, while the local enterprises will account for up to 76 million bricks. It is planned to manufacture 80 thousand tons of lime in 1965, four times more than during 1958, as well as 87 thousand tons of gypsum, eight times more than the amount produced in 1958.

The implementation of full scale mechanization into the building trade, a conversion to the assembly of pre-fabricated components at the building sites, demands a comprehensive development in the production of prefabricated reinforced concrete components and parts. Over 80 thousand cubic meters of them will be produced during 1965, as compared with 9 thousand cubic meters, that were actually manufactured during 1958. In addition to that, the production of rolled gypsum tiles in the amount of 400 thousand square meters per year, will be organized as well as the manufacture of wooden parts.

The manufacture of building materials new to the oblast will be organized during the seven year period: cement, it is planned to produce 100 thousand tons of cement in 1965, pliable roof tiles and mineral cotton.

An increase in the production of wall building materials will primarily be made on a basis of expanding and reconstructing

the existing enterprises.

The Strizhevskiy plant for the manufacture of silicate brick will be expanded to twice its present size; its production capacity will be raised to 200 million bricks per year. Brick factory No. 1 in the city of Kirov is being reconstructed and its production capacity will be increased to 30 million bricks. It is planned to construct a new silicate brick factory on the basis of the Gnusinskiy deposit of sand; it will have a production capacity of 85 million standardized bricks per year. Small plants manufacturing red brick should be established in all of the rayons of the oblast in order to liquidate irrational shipments of brick over long distances. A plant for the manufacture of red bricks, with a capacity of six million bricks per year, will be completed and placed into operation in 1959 in the workers' settlement of Vakhrusha in the Slobodskiy rayon.

A plant for the manufacture of pre-fabricated reinforced concrete components will be built in the city of Kirov, the first section of which will commence operations in 1959. A specialized shop for the manufacture of 400 thousand square meters of rolled gypsum tiles is under construction at the Kirovskiy brick factory No. 1. A plant for the manufacture of mineral cotton, with a potential production capacity of 65 thousand cubic meters per year by 1965 will be constructed in addition to a pasteboard plant, with a production capacity of 50 million square meters per year.

The introduction of these measures will permit an acceleration in the tempos and will improve the quality of construction of the dwellings and cultural-public service buildings, and it will also allow a conversion to an assembly of pre-fabricated components type of building and will lower the cost of construction.

The Seven Year Plan and the control figures of the State Planning Commission RSFSR stipulate the construction of a large cement plant. It must, however, be stated that there are considerable difficulties in the building of such a plant. The problem is that the basic reserves of cement raw material are located in the Sovetskiy rayon, which is 100 kilometers away from any railways. The solution to this problem is the construction of a railroad which would run from Kotel'nich to Yaransk to Yoshkar to Ola. This railway line is also necessary for connecting a group of highly productive agricultural rayons of the oblast and for the trans-shipment of a large volume of timber to the sparsely wooded central and southern rayons of our country along a shorter route.

One of the important tasks confronting the Seven Year Plan is a sharp increase in the production of consumer goods, so that it would become possible to satisfy the population with everything that is necessary and to liquidate the still existing deficit in certain commodities within the next several years.

The light and food industries are confronted with a first rate task of expanding the variety of their products and of improving their quality.

The Seven Year Plan for the development of the oblast's economy

stipulates high tempos for the increase in the production of consumer goods both by the sovmarkoz industries and by the local industries and the consumer cooperatives. Increase in the output of consumer goods is planned in the following volumes:

Type of Product	Unit of Measure	1958	1965	1965 in % as Compared with 1958
Furniture	Million rubles	71.7	340.0	by 4.7 times
Skis	Thousand pair	860.0	1,140.0	132
Leather shoes	Million pair	9.1	12.5	137
Felt shoes	Thousand pair	181.7	319.0	176
Knitted underwear	Thousand changes	88.4	130.0	147
Sewing products (cost of production)	Million rubles	34.7	46.0	138
Pianos	Instruments	317.0	2,300.0	by 7 times
Harmonicas and Accordions	Thousand Instruments	148.0	220	149
Metal beds	Thousand beds	27.2	50	183
Electric irons	Thousand irons	6.1	25	by 4 times
Electric ovens	Thousand ovens	5.4	20	by 3.7 times
Washing machines	Thousand washing machines	*	10	*
Special purpose electric motors	Thousand motors	17.1	90	by 5.3 times
Matches	Thousand boxes	1,635.0	1,755.0	107
Meat grinders	Thousand grinders	*	30.0	*
Porcelain and glazed china	Million rubles	*	9.0	*
Stamped and aluminum pots and pans	Tons	267.0	400.0	150
Carpets and carpet products	Square meters	1,600.0	5,000.0	by 3 times
Toys	Million rubles	30.0	48.0	157
Rubber soles	Thousand tons	15.9	26.0	163
Fur products	Million rubles	375.0	528.0	141

In order to fulfill the assignment for increasing the production of consumer goods the Seven Year Plan stipulates a rapid increase of capacities in the light and local industries. Over half a billion rubles are being allotted for capital construction in these branches, which will be used to build a number of new enterprises and to expand some of the existing enterprises.

A combine producing industrial fabrics will be constructed in the city of Kirov, with 108.9 thousand spinning spindles and 1,500 weaving looms, a flax combine for the production of tarpaulin fabrics in the city of Kotel'nich, with 14 thousand spindles and 557 weaving looms, a plant for the production of musical instruments in the city of Kirov with a production capacity of three thousand pianos per year, a plant for the production of slats for accordions, a wooden toy plant in the city of Kirov and a musical toy plant in the city of Kirovo-Cheptsk, as well as a moulding plant in the city of Novo-Vyatsk, a sewing factory in the city of Kirov, a porcelain and glazed china plant in the city of Kirovo-Chepetsk with a production capacity of three million pieces of china per year.

Considerable work is being accomplished in the expansion of production capacities of the leather combines imeni Komintern and imeni Lenin, the "Iskoz" combine and the "Belka" fur factory.

A new tanning plant will be placed into operation at the leather combine imeni Komintern and the shoe factory will be expanded. The production capacity of the enterprise engaged in the production of rough hides will increase by 1,500 tons, the production of russet grain leather--by 44 million square decimeters and the production of leather shoes--by 2 million pairs per year.

The production capacity of the leather combine imeni Lenin engaged in the manufacture of rough hides will increase by 1,500 tons, the production of russet grain leather--by 67 million square decimeters and the production of shoes--by 3 million pairs a year.

A shop for the production of microporous rubber with a production capacity of 12 thousand tons per year is under construction at the "Iskoz" combine. The "Belka" fur factory will place into operation a shop for the processing of sheepskin into artificial otter and sealskin with a capacity of 800 thousand sheepskins per year.

A sharp increase in agricultural production, a considerable expansion in the production of grain, potatoes, and livestock products are creating favorable conditions for a rapid development of the food industry. During the seven year period the production of meat will increase approximately 2.8 times, sausages and sausage products by 4.1 times, production of whole milk--by 3.4 times, animal fats--by 70%, cheese--by 3.5 times, and dehydrated milk--by 4 times. The output of bakery goods will increase 2.1 times, macaroni products--by 38%, confectionary products--by 76%, molasses--by seven times, dry starch--by 13 times, non-alcoholic beverages--by 2.7 times, beer by 2.25 times, and flour manufactured out of state grain--by 2 times.

The most important task confronting the food industry is that

of increasing the variety of its products, and the production of packaged commodities. Food commodities must have an attractive external appearance.

In order to handle the tasks involved in the expansion of the production of food commodities it is necessary to conduct extensive work designed to increase the production capacities of the food industry both by the construction of new enterprises and by means of the reconstruction and mechanization of the existing ones.

In order to achieve an expansion in the capacities of the meat processing industry of the sovkhoz it is planned to build new meat combines in the cities of Zuyevka and Sovetsk, with a capacity of 10 tons of meat and five tons of sausage products during each shift at both plants, and a plant in the city of Kotel'nich--with a production capacity of 20 tons of meat and 5 tons of sausage products per shift. A former distillery is being reconstructed into a meat combine, which will produce canned sausage and meat at a rate of up to 10 thousand cans every 24 hours.

The Kirovskiy, Slobodskiy, Kotel'nicheskiy, Vyatsko-Polyanskiy and Omutninskiy meat combines will be expanded in 1959. Slaughter houses are being reconstructed in the cities of Yaransk and Sovetsk, with the addition of cold storage facilities.

In view of the fact that the kolkhozes of the oblast have decided to sharply expand poultry breeding and the sale of poultry to the state, two continuous mechanized processing lines are under construction and new poultry slaughter points are being built at the Kirovskiy, Yaranskiy, and Vyatsko-Polyanskiy meat combines during 1959.

The production capacities of the meat processing industry will rise to 640 tons per shift by the end of the Seven Year Plan, or almost twice the volume achieved during 1958.

The dairy industry will be considerably developed in the course of the seven year period. Some 60 new dairies, creameries and cheese dairies will be constructed in the oblast and 62 such establishments will be reconstructed.

New plants for the manufacture of whole milk products will be constructed in the cities of Kirov, Vyatskiye Polyany, Zuyevka and Omutninsk as well as at the following workers' settlements: Belaya Kholunitsa, Lal'sk, Falenki and Loyno. Shops engaged in producing dietetic dairy products will be built in the cities of Slobodsk, Kotel'nich, Nolinsk Urzhum, Yaransk, the workers' settlement of Leninskoye in the Shabalinskiy rayon and in the villages of Podosinovets and Suna.

New cheese dairies are planned for the Khalturinskiy, Shurminskiy, Darovskiy, Sanchurskiy and Lebyazhskiy rayons. A canned milk plant will go into operation in the village of Tuzhe, with a capacity of 12 thousand standardized cans each 24 hours.

Extensive work will be done for the mechanization and automation of dairy production; the variety of products will increase and their quality will improve.

Of great significance is the introduction of the Kirovskiy flour milling combine during 1959-1960, which will produce 280 tons of flour of gradual reduction and 30 tons of grits each 24 hours. With the introduction of this enterprise the oblast will be adequately supplied with high grade flour of local production. In order to provide grain milling services for the rayons in the interior, roller mills are being constructed in the Zyuzdinskiy and Sharangskiy rayons.

15 installations for the production of combined fodder are under construction in 1959 at the storage points, which will have a positive effect on the supply of high quality, concentrated fodder for the communal cattle breeding.

In order to increase production and to expand the variety and to improve the quality of bread-bakery products, the plan stipulates the construction of a new bread bakery in the city of Kirov with a capacity of 60 tons of bread each 24 hours along with an expansion of bread bakeries in the city of Kotel'nich and the workers' settlement of Peskovka. The consumer cooperative will build mechanized bread bakeries in a number of the rayons of the oblast, which will be of great importance in freeing the women-kolkhoz members from this hard work.

In order to improve the quality and increase the production of confectionary goods a mechanized confectionary plant will be constructed in the city of Kirov with an annual capacity of 10 thousand tons.

Treacly-starch plants are being placed into operation in 1959 in the Shabalinskiy, Darovskiy and Kil'mezskiy rayons. A former distillery at Sanchursk is being rebuilt for treacly-starch production. During the seven year period treacly-starch enterprises will be constructed in the Sharangskiy, Urzhumskiy, Verkhoshizhemskiy and other interior rayons of the oblast. It will be easier to ship the potatoes from there in a processed form.

A specialized bottling plant for non-alcoholic beverages will be built in the city of Kirov. A brewery is planned for the city of Omutninsk with an annual production capacity of 50 thousand hectoliters.

In order to provide the bread baking industry with food yeast it is planned to build a yeast plant in the city of Kirov.

The processing of vegetables, berries, and mushrooms and their canning will increase considerably during the seven year period.

The construction of food enterprises, and their mechanization and automation will lead to the full satisfaction of the population's demand for a great variety of high quality food products by the end of the Seven Year Plan.

The development of industry, agriculture and transportation as well as an improvement of the living conditions of the workers are inconceivable without wide scale measures for the electrification of the entire economy and an expansion of the fuel industry.

Peat is undoubtedly the most prospective form of fuel for the Kirovskaya oblast. There are very large reserves of peat in the oblast; its extraction is easily subject to comprehensive mechanization,

the cost of production, as a result of such mechanization, is sharply decreasing with every year. The heat value of peat comes close to the calorie value of lignite coal. All this makes peat the most extensive and cheap type of fuel in the oblast.

In view of that the Seven Year Plan stipulates an increase in the extraction of peat to 3.5 million tons by 1965, or approximately 1.5 times greater than the amount extracted in 1958.

Approximately 320 million rubles will be spent on the development of the peat industry during the seven years, in the form of centralized capital investments, which will permit an expansion of the production capacities of the peat enterprises by 2 million 100 thousand tons. The production capacity of the Prokop'yevskiy peat enterprise in the Slobodskiy rayon will be increased by 330 thousand tons, the Karinskoye and Vas'kinskoye peat enterprises were reconstructed and the Burmakinskoye peat enterprise, with a capacity of 300 thousand tons, the Bakhtinskoye--170 thousand tons, the Gorokhovskoye--200 thousand tons, the Puetsko-Otvorskoye--400 thousand tons, the Pishchal'skoye--450 thousand tons, the Chistoye--150 thousand tons and the Plakunskoye peat enterprises--100 thousand tons were placed back into operation.

In order to supply the population of the city of Kirov with fuel, a peat briquette factory with an annual production capacity of 60 thousand tons of peat briquettes will be constructed.

In addition to the utilization of peat as fuel, the extraction of peat for use as fertilizer will be widely developed during the Seven Year Plan; for that purpose 56 mechanized peat teams will be organized at the Technical and Maintenance stations. In 1961 the extraction of peat for use as fertilizer will amount to 4.6 million tons, and by 1965 it will reach almost six million tons.

In accordance with the decisions of the 21st Congress of the party regarding the assurance of a high tempo in the process of electrification of the national economy, it is planned to increase the production of electric power twofold as compared with 1958.

An increased output of electric power and electric loads will be conducted on the basis of an increase in power of the Kirovo-Chepetsa thermoelectric power plant by 25 thousand kilowatts and the introduction of thermoelectric plant No. 4 in the city of Kirov, as well as the utilization of power received from the Votkinskaya Hydroelectric Power Plant, which will be connected to the Kirov power system by means of a high voltage power transmission line with a tension of 220 kilovolts.

Along with the electrification of industry, the railroad line from Gorkiy to Kirov to Perm' will also be fully electrified, as well as all of the sovkhoses, Technical and Maintenance Stations, kolkhoses and workers' settlements.

The electrification of the oblast economy will be essentially conducted on a basis of new high voltage transmission lines. New electric power plants, with a combined capacity of 30 thousand kilowatts are planned for those areas where industry requires heat

energy in addition to electric power: the "Krasnyy Kursant" paper mill with a capacity of six thousand kilowatts, at the Luzskiy housebuilding combine--with a capacity of 7.5 thousand kilowatts, at the Molomskiy wood chemical plant at the Al'mezh station--with a capacity of four thousand kilowatts, and one at the Kirsinskiy cable plant--with a capacity of six thousand kilowatts. The Vyatsko-Polyanskiy industrial center will be supplied with electric power from the Kazanskaya power system through the tractor sub-station of the Kazan'-Sverdlovsk railway line.

It is planned to construct a total of 2,470 kilometers of high voltage transmission lines at government expense during the seven year period, with tensions of 220, 110 and 35 thousand volts while at the expense of the kolkhozes, with the assistance of government credit, it is planned to build 25 thousand kilometers of power distribution lines with tensions of 10 thousand and 400 volts.

The power transmission lines will be built from the Balezino plant to the city of Kirov; from the city of Kirov to Burmakino, Kumany, Sunu, and the city of Nolinsk; from the city of Zuyevka, Kirov, Kotel'nich, and the Sherstki station on the Gor'kovskaya railroad line; from the city of Kotel'nich to the Svecha station; from the village of Kirs to Peskovka and Omutninsk in one direction and to the village of Rudnichnyy in the other; from the city of Kotel'nich to Arbazh and Yaransk; from Vyatskikh Polyan to the village of Bol'shoy Roy of the Shurminskiy rayon and from the city of Kotlas to the city of Luza.

Power lines will be built in the Kayskiy rayon from the village of Rudnichnyy to the village of Sozimskiy and on to the village of Batalovo. In order to electrify the northern portion of the Slobodskiy rayon, transmission line up to the village of Shestakova is under construction; for the electrification of a part of the Verkhovinskiy and the Khalturinskiy rayons, a power line is being built from the settlement of Murygino to Medyany, the village of Stepanovshchina and the city of Khalturin. A power transmission line is under construction from Spaso-Talitsa to Krysova and Pishchal'ya in order to complete the electrification of the Orichevskiy rayon. A power line from the village of Prosnitsa to the village of Seleznikhi is being laid for the electrification of that part of the Zuyevskiy rayon beyond the river. Vozhgaly and Verkhoshizhem'ye will be connected to the Kumenskaya substation. Bogorodskoye, Porez and Tataurovo will be connected to the Sunskaya substation; Nema will be joined to the Nolinskaya substation; Pizhanka, Kochnevo, Tuzha and Sovietsk will be connected to the Arbazhskaya substation; Lal'sk, Papulovo, Podosinovets and Utmanovo will be connected to the Luzskaya substation; the Makar'ye, Darovskoye, Gorokhovskoye and Plakunskoye peat enterprises will be connected to the Kotel'nicheskaya substation; Salobelyaki will be connected to the Yranskaya substation; Chernovskoye and the settlement of Leninskoye of the Shabilinskiy rayon will be connected to the Svechinskaya substation; Mukhino and Talitsa of the Falenskiy rayon will be connected to the Zuyevskaya substation; the cities of Malmyzh,

Urzhum and the village of Lebyazh'ye will be connected to the Vyatsko-Polyanskaya substation; while Polom and Nogorskoye will be connected to the Belokholunitskaya substation. The Sanchurskiy rayon will receive its electric power by joining the power network of the Mariyskaya republic. A power transmission line will be built from the Tonkino substation of the Gor'kovskaya oblast to Sharanga and Kiknur. After the verification of technical possibilities the Yaranskiy rayon may be connected to the Orshanskaya substation of the Mariyskaya republic, which will bring the target dates for the electrification of this interior rayon much closer.

In that manner the centralized system of electric power supply will be distributed to 37 rayons of the oblast, including some 28 rayons that will be supplied by the Kirovskaya power network and nine rayons that will be provided with power by the neighboring oblasts and autonomous republics. The Zyuzdinskiy, Kayskiy, Kil'mezskiy, Murshanskiy and a large part of the Oparinskiy rayon will be connected to the power networks after 1965; it is therefore planned to construct temporary thermoelectric power plants in those rayons.

In view of the fact that certain rayons of the oblast (the Malmyzhskiy, Shurminskiy, Urzhumskiy and Shabalinskiy rayons) will be connected to high voltage power networks by the last year of the Seven Year Plan, it would be feasible to build temporary kolkhoz thermoelectric power plants with diesel engines in those rayons as well. It is planned to build temporary kolkhoz and inter-kolkhoz thermoelectric power plants with a combined capacity of 14.7 thousand kilowatts.

The implementation of electric power into all of the industrial processes assures a considerable rise in the level of mechanization and automation of industrial production as well as a rise in the annual productivity of labor rate by 50-52% in the course of the seven year period. If the fact that the duration of the work week will be decreased to 35 hours is taken into consideration, the hourly productivity of labor must increase by a minimum of 70-75%.

This is the plan of industrial development for the oblast for the first seven year period.

The industrial workers of the Kirovskaya oblast, inspired by the decisions of the 21st Congress of the CPSU, have assumed obligations to fulfill the Seven Year Plan in five years, and are struggling for the fulfillment and over-fulfillment of shift norms of production by every worker, for the economy of raw materials, and other material and for a decrease in the cost of production. The competition for the title of brigade of communist labor developed on a wide scale. All of this assured the fulfillment of the production plan for the first year of the Seven Year Plan within a period of eight months by 106%, as well as the overfulfillment of the plan assignments for increasing the productivity of labor and a decrease in the cost of production.

### Agriculture.

The task of the Seven Year Plan with respect to agriculture is to raise agricultural production to a level which "would satisfy the requirements of the population for the most important food products, to sharply increase the resources of agricultural raw materials so that it will be possible to provide the population with a wide variety of food products of high quality and to satisfy all other requirements by the government in agricultural products." (Control Figures for the Development of the National Economy of the USSR for 1959-1965.)

The agriculture of the Kirovskaya oblast began the Seven Year Plan technologically well equipped and organizationally consolidated. The kolkhozes and sovkhoses are large farms; they are in a majority of cases headed by experienced, knowledgeable organizers of agricultural production. Thousands of specialists such as engineers, technicians, agronomists, and zootechnicians have joined the kolkhozes and sovkhoses in the past several years; mass cadres of field crop growers, cattle breeders and mechanizers, who like their work and possess the necessary experience have evolved. All this assures a successful resolution of the tasks established for the agriculture of the oblast by the Seven Year Plan.

The participants of an oblast conference of agricultural workers, which took place in January of 1959, assumed high obligations for increasing the output of all agricultural products and their sale to the state during the first year of the Seven Year Plan. After discussing an appeal by the agricultural workers of the Ryazanskiy oblast regarding the development of a socialist competition for the most rapid fulfillment of the decisions of the December Plenum of the Central Committee CPSU, the participants of the conference, in the name of all agricultural workers obligated themselves to grow a harvest of grain crops in 1959 of not less than 10 centners per hectare, potatoes--110 centners per hectare, clover hay--from 25 to 30 centners per hectare, to raise the production of meat at the kolkhozes and sovkhoses by two and a half times and to sell the state 100 thousand tons of meat for the oblast as a whole--two times more than in 1958, i.e., to fulfill the Seven Year Plan for the sale of meat to the government by 1959--the first year of the Seven Year Plan. The leading kolkhozes and rayons assumed even higher obligations.

The Prosnitskiy rayon promised to increase the sale of meat to the state by 3.2 times in 1959, the Novo-Vyatskiy--by 3.1 times, the Kotel'nicheskiy, Kumenskiy and Slobodski rayons--by 3 times, the Nolinskiy rayon--by 2.6 times as compared with 1958.

The kolkhoz imeni Lenina of the Zuyevski rayon assumed an obligation to increase the production of meat by 4.5 times, the kolkhozes "Mayak" and imeni Kirova of the Prosnitskiy rayon--by 4 times, the kolkhozes imeni Lenina of the Slobodski rayon and imeni Lenina of the Falenskiy rayon--by 3.5 times, the kolkhoz "Udarnik" of the Nolinskiy rayon--by 3 times as compared with the preceding year.

No less responsible obligations were assumed for increasing the production of milk and its sale to the state. The production

must be increased by 25% as compared with 1958 and 250 thousand tons sold to the government, 42 thousand tons more than in 1958.

The kolkhozes assumed an obligation to increase the number of head of cattle in 1959 as follows: large horned cattle--by 25% (including cows, by 20%), hogs--by 30% and sheep by 26%.

The struggle of agricultural workers of the oblast under the leadership of the oblast party organization, for the fulfillment of the obligations assumed for increasing the production and sale to the government of agricultural product in 1959 is yielding results. This is substantiated by some of the results of the fulfillment of obligations for the first eight months of the first year of the Seven Year Plan.

In 1959 the kolkhozes and sovkhoses of the oblast stocked their seed for spring sowing better than they did during the past years. 23% more manure was applied to the fields during that year than during 1958, as well as 2.5 times more peat and twice as much mineral fertilizers.

The sowing of summer crops was conducted with greater success and within shorter agrotechnical periods of time. Some 232 thousand hectares of winter crops were supplemented with mineral and local fertilizers, 62% more than in 1958.

On September 1 1959 as compared with 1 September 1958 the number of head of large horned cattle at the kolkhozes of the oblast increased by 145.5 thousand head or by 37%, including 10.8 thousand more cows, an increase of 8%; the number of hogs increased by 85.1 thousand head or by 24%; full grown poultry--by 21.4 thousand or by 8% and young poultry--by almost three times as compared with the preceding year.

The production of meat (in live weight) increased by 10,926 tons or by 58% at the kolkhozes of the oblast over eight months of 1959 as compared with a similar period during the past year; the gross yield of milk increased by 22%. The average yield of milk per cow amounted to 1,753 kilograms for eight months of 1959 as compared with 1,549 kilograms yielded in 1958.

16,000 tons of meat were sold to the government during an eight month period of 1959, which is 76.4% more than for the same period of the preceding year. The sale of milk to the government increased by 44 thousand tons or by 28% as compared with 1958. 10.0 million more eggs were sold to the government than in 1958. On 15 September 1959 the oblast fulfilled the annual plan of state grain purchases ahead of schedule, the plan for sale of eggs to the state was also fulfilled ahead of schedule on 1 September, and the plan for the state purchase of meat and milk--by 30 September, also ahead of schedule.

In recognition of the successful development of cattle breeding and the overfulfillment of the plan for the sale of livestock products to the state for the first six months of 1959, the Kirovskaya oblast was awarded the challenge Red Banner of the RSFSR Bureau of the Central Committee CPSU and of the Council of Ministers RSFSR

along with a monetary award of one hundred thousand rubles to be used as incentive for progressive cattle breeders.

The labor enthusiasm of the kolkhoz peasantry and the sovkhos workers in their struggle for a considerable overfulfillment of the production plan and for the fulfillment of a plan of sales of livestock and field crop products to the government are the best kind of guarantee for a fulfillment of the tasks established by the decision of the 21st Congress of the CPSU regarding the further upsurge in the agriculture of our Homeland.

The tasks inherent in the further development of all the branches of agriculture during the seven year period will be truly gigantic.

The kolkhozes and sovkhoses of the oblast must assure a rapid growth of agricultural production during the current seven year period, primarily of grain, as a basis of all agricultural production. It is planned to increase the gross harvest of grain in the Kirovskaya oblast from 2 to 2.5 times by 1965 by comparison with 1958 and to obtain not less than 110-120 million puds of grain.

Such an increase in grain production must be accomplished not by expanding the land area under grain crops, but exclusively by raising the crop yield. Up to the present time the grain crop yields continue to be very low at the kolkhozes of the oblast. Over the past five year period the grain harvests amounted to only six centners per hectare on the average for the oblast; in order to reap a gross harvest such as that indicated above it is necessary to raise the crop yield by not less than 12-14 centners. The possibilities for accomplishing that do exist at the kolkhozes. The kolkhozes and the Maintenance and Technical Stations of the oblast are highly mechanized units at the present time. Within the next several years the machine building industry will supply agriculture with even better machinery which will permit the sovkhoses and the kolkhozes to produce more with a smaller expenditure of labor and money.

As commonly known the kolkhozes and the sovkhoses of our country will receive over one million tractors during the seven year period, in addition to approximately 400 thousand grain combines and a large number of other machines and tools. The availability of electric power to the sovkhoses and the kolkhozes will increase two-fold, and the consumption of electricity will increase fourfold. It must also be considered that the kolkhozes will be staffed with skilled cadres of specialists and there will be possibilities for increasing the application of organic fertilizers in connection with the development of animal husbandry, as well as an increase in the purveyance of mineral fertilizers to agriculture. "Under these circumstances," said comrade N.S. Khrushchev at the December Plenum of the Central Committee CPSU, "the task of raising the crop yield is placed on a practical basis." The practicable nature of the task of increasing the harvest of grain crops is substantiated by the experience of many progressive kolkhozes of the Kirovskaya oblast: the

kolkhozes "Krasnyy Oktyabr" of the Kumenskiy rayon, "Iskra" of the Kotel'nicheskiy rayon, "Udarnik" of the Nolinitskiy rayon and many others year after year obtain not less than 14-15 centners of grain per hectare of land.

In order to obtain high yield, stable crops it is necessary to implement a scientifically based system of agriculture into kolkhozes and sovkhoses with special consideration of the peculiarities inherent to the different farms. At the present time, along with the expansion of the kolkhozes, there exists a full possibility to introduce crop rotation at all of the kolkhozes within the next several years, and to organize a proper alternation of crops and their interrelationship on the different sown areas.

Sowing with quality seed of the best grain and other crops that provide the highest yield under our particular conditions is of great importance in raising the crop yield. Winter rye is sown essentially with high grade seed "Vyatka-2." Seed growing of summer grain crops however, is conducted very poorly. A task has been established--for all kolkhozes to start sowing summer crops with high grade seed only within the next several years. The Kirovskiy agricultural institute must perform an important role in the development of new high yield types.

Podzolic, loamy and sandy soils of the oblast are capable of yielding abundant harvests only with the introduction of a large amount of organic and mineral fertilizers. In 1958 the kolkhozes introduced 6.9 million tons of manure, and 524 thousand tons of peat which amounts to 2.7 tons per hectare of cultivated land. This is quite inadequate. Within the next several years it is necessary to raise the utilization of manure up to 18-20 million tons and peat--up to six million tons, which will comprise approximately 10 tons per hectare of cultivated land.

In view of the fact that the soils of the oblast are of high acidity liming is very important. Considering the fact that by 1961 the sovkhos enterprises must bring the production of lime dust to 300 thousand tons per year, and the kolkhozes with the assistance of the Maintenance and Technical Stations must extract up to 60 thousand tons of calcareous tuff and lime dust, not less than 120 thousand hectares of cultivated land per year should be limed, and with the application of peat compost a considerably larger area should be limed.

Such important conditions for raising the crop yield as the performance of agricultural work within the proper times of the year and an improvement in the quality of the work must be kept in mind.

An increase in the production of potatoes, vegetables and flax is of great importance to the Kirovskaya oblast. The production of potatoes at the kolkhozes of the oblast must be raised to 1.5 million tons by the end of the Seven Year Plan; in order to attain that it is necessary to expand the area planted with potato crops from 77 thousand to 120 thousand hectares and to raise its crop yield to not less

than 120 centners per hectare. A decisive condition for such an increase in the gross harvests of potatoes is a comprehensive mechanization of all work associated with sowing, inter-row cultivation and harvesting, which, in turn, is inconceivable without a conversion to the square pocket system of planting. With square pocket planting of potato crops there is a considerably saving in labor spend on its cultivation. The "Krasnyy Oktyabr" kolkhoz of the Kumenskiy rayon, for example, even though it has not yet completely shifted to a square pocket planting system and a comprehensive method of cultivation, already achieved a productivity of labor in the cultivation of potato crops that is 3.1 times higher than the average indices for the kolkhozes of the oblast.

The agricultural workers of the oblast are confronted with extensive tasks in developing vegetable growing. In 1958 the sowing area under vegetable crops amounted to only 2.8 thousand hectares, and the average crop yield was 27.2 centners per hectare. Many kolkhozes, especially those located around the center of the oblast, have built hot houses, but most of them are not used or are used for other purposes. Hothouse farming is not expanding either. The retarded nature of vegetable farming leads to a situation where most of the vegetables are shipped to the oblast from the southern and central rayons of the Soviet Union.

The Seven Year Plan stipulates the cultivation of vegetables in a volume that could be adequate to feed the population. The area under crops will be expanded to 10 thousand hectares of by 3.5 times, and the crop yield will be raised to 150 centners per hectare. The establishment of a vegetable supply basis around the city of Kirov and in the northern rayons of the oblast, where the industry will become rapidly developed and the urban population will grow, is of particular significance.

Flax is the most important trading commodity of the oblast, which provides the kolkhozes with high financial incomes. In 1958 the kolkhozes received 268.1 million rubles of income from 83.1 thousand hectares of land planted with flax, or 3,230 rubles per hectare, whereas a hectare of grain crops yielded only 77 rubles and a hectare of potato crops--431 rubles of income.

It is planned to expand the land areas under flax crops to 110 thousand hectares and the crop yield of both flax fiber and flax seed to 3.5-4 centners per hectare within the seven year period, which will result in a total harvest of 38-40 thousand tons of flax fiber, i. e. twice as much as in 1958.

Over the seven year period the kolkhozes and sovkhoses must establish a stable fodder basis for the expanding cattle breeding industry. An improved planting of clover is of particular importance. It is necessary to expand the mowing area under perennial grass to not less than 400-450 thousand hectares and to raise their crop yield to 30-35 centners per hectare.

The storage of silage is of the greatest importance for

increasing the production of milk and meat. A decisive role in expanding the production of succulent fodder is performed by corn. The experience acquired by many kolkhozes indicates that corn, under the conditions in existence at the Kirovskaya oblast, may be grown with success and yield up to 500 or more centners of green mash on cobs per hectare. Therefore it is planned to expand the areas under corn crops from 400 to 100 thousand hectares during the seven year period, and to obtain not less than 500 centners of green mash per hectare, in order to be able to accumulate more than five million tons of corn silage. It is necessary to store 15-20 tons of silage per cow.

The planting of vetch-oat and pea-oat mixtures along with winter rye as soiling food will be practiced extensively, primarily on a basis of decreasing clean fallow.

Large areas covered with natural fodder land are available in the kolkhozes of the oblast--hay mowing areas and pasture lands. Work designed to improve the meadows and pastures, have, however, up until now been conducted on a very small scale. As a result of that considerable areas of the meadow lands have overgrown with bush, small forests; they are covered with marshes and yield low hay harvests--six to eight centners per hectare.

The Seven Year Plan stipulates the accomplishment of work on a wide scale, designed to improve the natural hay mowing areas and pastures, in order to raise their productivity by no less than one and a half times. Work for the drainage of 160 thousand hectares of meadows and pastures, for the clearing of shrubbery over an area of 165 thousand hectares, for the uprooting and the removal of stumps over an area of 186 thousand hectares, and for the tototilling of 91 thousand hectares with a planting of a mixture of meadow-pasture grasses will all be conducted during the seven year period. In addition to that it is planned to turn over 455 thousand hectares of virgin land, 300 thousand hectares of which will be used for cultivated meadows and pasture lands.

It is planned to conduct the entire volume of work to be done in draining, maintenance of the drainage network and in clearing essentially with the equipment and assistance of the Maintenance and Technical Stations, whereas work connected with plowing and rototilling is to be done by the kolkhozes.

An increase in the production of coarse, succulent and concentrated fodder outlined by the Seven Year Plan assures an increase in the output of livestock products in volumes, defined by the control figures for the development of the national economy of the USSR for 1959-1965. According to the control figures for the USSR it is planned to increase the production of meat by two times, milk by 1.7 to 1.8 times, wool by 1.7 times, and eggs by 1.6 times by 1965 by comparison with 1958.

In his report at the 21st Congress CPSU, comrade N.S Khrushchev pointed out that our country has reached a leading position in the world in the gross production of milk and butter. "Along with that," he stated, "it will be necessary to conduct extensive work designed to

utilize all the reserves and possibilities, in order to increase the production of meat by 2.5-3 times, to considerably overfulfill the assignment stipulated by the Seven Year Plan and to realize a challenge promulgated by the leading kolkhozes and sovkhoses of the country--to overtake the United States of American in the output of livestock products."

In 1958 all the farms of the oblast produced 109.5 thousand tons of meat (excluding horse meat), including 50 thousand tons which were produced by the kolkhozes, sovkhoses and the auxiliary farms and 59.5 thousand tons produced by the kolkhoz members', workers' and employees' farms. Not less than 275 thousand tons of meat must be produced in the oblast during 1965. Considering the fact that the production of meat at the private farms will increase very insignificantly or will not increase at all, the kolkhozes and sovkhoses will have to increase their production from 50 to 215 thousand tons, or by 4.3 times. This increase in productivity may be achieved by the kolkhozes of the oblast by increasing the number of head of cattle and by raising the productivity of all types of cattle, the development of poultry breeding as well as the raising of rabbits at the kolkhoz farms.

An increase in the production of meat during the first several years of the Seven Year Plan may be accomplished primarily by hog and poultry breeding. This will give enough time to accumulate a sufficient number of head of large horned cattle and sheep during the first period of the Seven Year Plan and will establish conditions that will lead to a sharp increase in the production of beef and mutton during the subsequent years. Preliminary estimates indicate that during the last year of the Seven Year Plan the kolkhozes and sovkhoses will be capable of producing the following amounts of meat based on a system of fattening the cattle:

Hogs--one million head with an average weight of 80 kilograms, which will yield . . . . . 80 thousand tons of meat

Large horned cattle--400 thousand head, weighing 250 kilograms each, which will increase the production of beef to. . . . . 100 thousand tons

Sheep--not less than 600 thousand head, which will result in the production of mutton in a volume of. . . . . 20 thousand tons

The fattening of poultry and rabbits must yield not less than . . . . . 15 thousand tons

In order to attain such indices the kolkhozes must considerably increase the number of head of cattle of all types and raise the live weight of each animal that is taken to slaughter. The Seven Year Plan

stipulates an increase in the number of communal head of large horned cattle at the kolkhozes by not less than 2.3 times (including cows--by three times), hogs--by 2.9 times, sheep--two times and poultry--by three to five times.

Such a growth of communal cattle breeding results in a denser cattle population per 100 hectares of agricultural land at the kolkhozes of the oblast, as follows:

	Number of Head	
	1958	1965
Large horned cattle	8	18
Including cows	3	9
Hogs (per 100 hectares of plowed land)	7	19
Sheep	7	14

It is evident from this table that the number of head of cattle at the kolkhozes of the oblast will not attain a level by the end of the Seven Year Plan necessary for rayons without chernozem soil--no less than 20-25 cows for every 100 hectares of agricultural land.

The aspirations of the kolkhozes and sovkhoses to overfulfill the assignments of the Seven Year Plan in the production of meat, milk and other livestock products must be fully encouraged. An important reserve for increasing the number of cattle and the production of meat is the purchase of calves by the kolkhozes from kolkhoz members and from the workers and employees. The kolkhozes already purchased 156 thousand calves during the first nine months of the first year of the Seven Year Plan. Such purchases must increase still farther during the next several years.

An increase in the production of poultry meat is of great significance. For that purpose it is necessary to organize a year round system of growing chicks for meat until they are three months old. The existence of all types of water reservoirs in the oblast permits the breeding of millions of water fowl and obtaining thousands of tons of good cheap fowl meat with a small expenditure of concentrated feed and labor.

The Kirovskaya oblast is a dairy farming zone. Therefore the production of milk must expand by not less than 2.2 times, and by four times at the kolkhozes in all branches of agriculture during the course of the Seven Year Plan. For that purpose it is necessary to increase the milk yield per cow, beside increasing the number of head, from 1,954 kilograms of milk in 1958 to 2,700 kilograms in 1965.

The production of eggs in all categories of farming will increase 1.5 times during the Seven Year Plan, and by five times at the kolkhozes. It is planned to increase the production of wool by 1.7 times; the kolkhozes will increase their production of wool by 2.4 times.

The growth in the output of agricultural products assures a sharp increase in the ratio of commodity production to the total output and in the sale of agricultural produce to the state (especially livestock products). The financial incomes of the kolkhozes will increase, along with deductions for the indivisible fund and financial grants to the kolkhoz members.

Special attention must be directed at improving the farms of the economically backward kolkhozes. That is one of the integral conditions for resolving the tasks established by the 21st Congress of the Party and by the December Plenum of the Central Committee CPSU for increasing the output of agricultural products.

One of the more important tasks is an increase in the productivity of labor and a decrease in the cost of agricultural production. V.I. Lenin on more than one occasion pointed out the decisive significance of the productivity of labor in achieving a victory of the new social order. "Increasing the productivity of labor," he said, "comprises one of the essential tasks, since without that a final transfer to communism is impossible." It must be noted that the productivity of labor in our case developed considerably slower than it did in industry. The productivity of labor of the workers in industry increased 10 times for the country as a whole, compared with the pre-revolutionary period; in agriculture it increased only fourfold. The conversion to a monetary system of remuneration of labor in the entire oblast, not only by the economically powerful but by the poorer kolkhozes as well, sharply increased the interest of the kolkhoz members in the development of an artel type of farming as well as the productivity of labor at the kolkhozes.

The kolkhozes and sovkhoses at the present time have all the necessary conditions in order to raise the productivity of labor over the seven year period by not less than two times and to sharply decrease the cost of agricultural production.

Inspired by the decisions of the 21st Congress of the Communist Party, the agricultural toilers of the oblast are devoting all their energy towards the fulfillment of the socialist obligations that they assumed to raise the output of agricultural products during 1959--the first year of the Seven Year Plan, since the tempos evident in the fulfillment of the plan during that year will to a great degree determine the successful fulfillment and overfulfillment of the entire Seven Year Plan.

#### Transportation and Communication.

The development of the economy of the oblast, outlined by the Seven Year Plan is inconceivable without a further development of

transportation. Therefore a comprehensive technical reconstruction of the basic types of transportation is planned for the Seven Year Plan, particularly of air and railroad transportation.

The technical reconstruction of railroad transportation is conducted on a basis of electrification and a widescale implementation of diesel engines. Among the roads that will be electrified during 1959-1965, the control figures plan the electrification of such important routes as Moscow-Gor'kiy-Kirov-Perm'-Sverdlovsk and Moscow-Kazan'-Sverdlovsk. Both of these routes pass through the Kirovskaya oblast. The cargo turnover of the railroads of the oblast will increase approximately 45%.

In 1963 the section of railroad between Kirov and Balezino will be electrified, which will result in a radical change of the locomotive depots. The movement of cargo between Lyangasovo and Svecha will be serviced by the Lyangasovo depot which is equipped with long distance and yard electric locomotives. The Kirov depot will service the movement of passenger trains between Kirov-Balezino, Kirov-Shakhun'ya and Kirov-Svecha with its electric locomotives.

Railroad lines passing through the territory of the oblast--the Kirov-Kotlas and Yar-Verkhnekamskaya lines--will be converted to diesel power. For that purpose it will be necessary to reconstruct the Murashinskiy locomotive depot. The Zuyevskiy locomotive depot will be reconstructed to service electric locomotives.

After a proper organization of the railways it will be possible to increase the speed of the freight and passenger trains up to 90-95 kilometers per hour. The average distance covered by electric locomotives within a 24 hour period will amount to 1,000 kilometers, i.e. it will exceed the average distance travelled by a steam locomotive within a 24 hour period.

Prior to the introduction of electric locomotives the Lyangasovskiy, and in the future, the other depots as well will be converted to liquid fuel--black fuel oil.

In order to assure a timely processing of the increasing flow of cargo, extensive work designed to expand the stations, signal systems, and switches will be conducted along with loading and unloading operations.

In order to improve passenger service, the construction of a new railway station at the Kirov station at a cost of five million rubles will be completed in 1960, and a new railroad station will be constructed during the Seven Year Plan at the Stal'naya station at a cost of 1.4 million rubles. It is planned to construct a second track between Kirov and Svecha and an alternate dispatch center.

Water transport will be developed along with railroad transportation, the cargo turnover on which will increase almost twofold in the oblast during the course of the Seven Year Plan. The river fleet will be renovated and supplemented with dry loading barges, tug boats and passenger motor vessels. Work will be conducted for the mechanization of loading and unloading operations. The volume of dredging and straightening work will be increased on the Vyatka

river, which will improve navigation conditions. The Vyatka river shipping system must develop transportation along the smaller rivers in a comprehensive manner, since for many of the rayons of the oblast this represents the principal means of transportation.

The basic task of automobile transportation in the Seven Year Plan is to accomplish the transportation of cargo over short distances in a volume that would satisfy the requirements of the national economy of the oblast, along with a considerable decrease in the cost of such transportation. The expansion of motor transportation systems and an improvement in the work of the motor vehicles will lead to a considerable increase in the productivity of motor vehicle transportation and a decrease in the cost of transportation.

The cargo turnover of the motor vehicle form of shipment and the transportation of passengers by bus will increase by approximately 3.7-3.8 times over the seven year period.

In order to assure the proper development of motor vehicle transportation it is necessary to significantly increase the condition of all the automobile roads and to build new roads. The Seven Year Plan stipulates the construction of a new automobile road with a hard surface from the city of Kirov through Sovetsk to Yaransk to Kiknur to Shakhun'yu and roads from Belaya Kholushina to Nagorskoye. Other basic automobile roads of the oblast will undergo major overhaul and repair and will be paved with asphalt or covered with blacking over considerable stretches. A new bridge will be constructed over the Pizkhma river along the Yaransk-Kotel'nich road. During the seven year period it is planned to build new bridges over the river Bystritsa along the road from Kirov to Khalturin, across the Nemda river along the road from Sovetsk to Yaransk and across the Kama river in the Zyuzdinskiy rayon. In order to conduct work for paving the roads with asphalt three new asphalt concrete plants will be constructed in the cities of Kotel'nich, Slobodsk and Nalinsk and one installation for the manufacture of cold asphalt concrete.

The Seven Year Plan stipulates a further development and perfection of the means of communication. The radiofication of the rural area will be completed in 1961; for that purpose some 165 thousand new radio points. By the end of 1962 all the kolkhozes of the oblast will be wired for telephone service; the capacity of the telephone exchanges will increase by 11 thousand numbers. A new telephone exchange will go into operation in the city of Kirov with a capacity for 1,500 numbers. The inter-city telephone network will become considerably improved.

Extensive measures will be conducted to expand television broadcasting and to construct relay stations in a number of rayons of the oblast, which will expand the coverage of the Kirov television center to a great degree.

#### Welfare and Culture.

Everything that is taking place in our country is done for the

good of the Soviet man, for a more complete satisfaction of his growing needs.

The present stage of the development of the economy contains all of the conditions that are necessary in order for our workers, the kolkhoz peasantry, the intelligentsia and all the Soviet people to start living even better, to be able to better satisfy all of their growing material and spiritual requirements.

The decision of the 21st Congress of the CPSU stipulates an increase in the national income by 62-65% during the seven year period, which assures an increase in the consumers' fund by 60-63% over the seven year period. The real per capita incomes of the professional, industrial and office workers will on the average increase by 40%; the incomes of the kolkhoz members will also increase by not less than 40%.

The 21st Congress of the party decided to revoke taxation of the population within the next several years, which will result in a considerable increase in the real wages of the industrial, professional and office workers as well as the kolkhoz members' incomes.

Measures designed to raise the wages of the low paid industrial, professional and office workers will be conducted during the current seven year period; their wages will be increased from 270-350 rubles to 400-450 rubles per month. A further increase in the old age pensions from 300 rubles to 400 rubles in the city and from 255 to 340 rubles for those pensioners who are permanently residing in a rural area and who are associated with agriculture.

Measures shortening the work day and the work week will be carried out. Transfer of all the industrial, professional and office workers to a seven hour work day will be completed in 1960, while workers engaged in leading professions in the coal and mining industry in underground projects--to a six hour work day.

In 1962 the industrial, professional and office workers on a seven hour workday will be transferred to a 40 hour week, and starting with 1964, the gradual transfer of workers, occupied in underground projects and in production with harmful working conditions, and all of the other workers--to a 35 hour work week with two days off with a six to seven hour workday. "The USSR will have the shortest workday and work week in the world along with increasing welfare of the population." (N.S. Khrushchev, report at the 21st Congress CPSU.)

It is planned to expand the commodity turnover, to expand the building of dwellings on a grandiose scale, along with further steady improvement in city planning and that of the populated rural points, an increased capacity of the water supply systems, sewage networks, gasification, heating networks, electric power supply, an improvement in the public transportation service, public bathing facilities, better laundries, barber shops and other types of public services.

The Seven Year Plan stipulates extensive measures to be conducted in the development of national education, a rise in culture and

science and an improvement in the medical servicing of the population.

It is quite understandable that the rise in material welfare and the cultural level of the Soviet people that is outlined by the Seven Year Plan also fully applies to the Kirovskaya oblast.

The retail commodity turnover in the oblast will increase during the seven year period by approximately 62% and will expand from 5.3 billion rubles in 1958 to 8-8.5 billion rubles in 1965 as a result of the increase in real incomes of the workers and an increased output of consumer goods. A particularly large increase in the commodity turnover is planned for the last three years of the Seven Year Plan. Rural trading will develop at a brisk tempo, since the incomes of the rural population will increase somewhat faster than that of the urban population, especially in connection with the transfer to a financial remuneration of the kolkhoz members' labor. The levels of consumption of the rural and urban populations will gradually come close to each other.

Special attention is being devoted to the development of public catering, which is of great importance in freeing the workers, particularly women, from household work in the preparation of food, the washing of dishes, etc.

The production of food prepared on the premises must be sharply increased at the cafeterias, restaurants, snack bars and other enterprises of public feeding. The output of food prepared in that manner in the course of the seven year period must increase by not less than twofold.

745 public catering enterprises accommodating 29 thousand persons will be placed into operation between 1959 and 1965, including 395 enterprises with a capacity for 16 thousand persons in the rural areas on the basis of the consumer cooperatives. Each plant, factory, higher and secondary educational institution must have a public cafeteria. A cafeteria with room for 50-75 persons must be built for every 500 workers and for every 200 students there must be a cafeteria with room for 40-50 people.

In addition to that it is planned to organize household kitchens, which will operate on a self-service principle.

An important task in the development of public catering is an increase in the quality and decrease in the cost of the various dishes. For that purpose a centralized preparation of pre-cooked food will be conducted at the food preparation shops, meat combines and at the vegetable and fruit combine of the oblast consumer union. It is planned to organize 17 food preparation shops in the oblast in the course of the Seven Year Plan. The labor of the public catering workers will be mechanized.

The consumption of such valuable products as milk, meat, eggs, sugar, vegetables and fruit by the population will increase sharply in the years of the Seven Year Plan. The sale of meat products for the Soviet Union as a whole will increase by 2.23 times, the sale of dairy products--by 87%, and eggs--by two times for the Soviet Union

as a whole. The per capita consumption of dairy products by 1965 will be 391 kilograms, sugar--40 kilograms, fish--13 kilograms, etc.

The sale of vegetables will increase twofold, fruit--3.6 times, citrus fruit--two times and melon fruit--by 2.1 times.

The population will be fully provided with a good quality of clothing and footwear. The sale of fabrics will increase 54% over the seven year period, sewn products--by 94%, knitwear--by 2.2 times, leather shoes--by 49% and felt footwear--by 70%.

The sale of cultural-public service commodities will increase still further, especially of products that facilitate the household chores of women--washing machines, refrigerators, electric irons, electric heating and other appliances.

The expansion of the commodity turnover will require an expansion in the number of retail outlets. It is necessary that by the end of the seven year period there would be not less than six working positions at the retail stores, grocery stores and temporary stores for every 1,000 persons, and room for not less than 25 persons at the public catering enterprises. Modern automatic vending machines will be installed on a wide scale for the sale of piece goods. Approximately one million of such vending machines will be placed into operation in the country during the seven year period.

The expansion in the network of tailoring and clothes mending, shoe repair, and of enterprises engaged in the maintenance of dwellings, repair of furniture, and of objects of household and cultural use, enterprises renting musical instruments and objects of household use will all perform a considerable role for improving public service. During the first three years of the Seven Year Plan it is planned to expand the number of tailoring establishments and custom tailoring shops to 53, those engaged in the repair and reconditioning of furniture--to 20, to build 11 new public service combines and to organize 28 brigades for the maintenance of dwellings at the expense of the citizens themselves and 25 rental establishments.

The construction of dwellings performs an important role in raising the welfare of the workers, since, in connection with the rapid growth of the urban population, there is a great need for housing in the cities and settlements.

As commonly known the Central Committee CPSU and the Council of Ministers USSR adopted a resolution in 1957 "Regarding the development of homebuilding in the USSR," which is confronted with the task of liquidating the lack of housing in the country within the next 10-12 years. A decisive step must be taken during the seven year period towards the fulfillment of this task.

According to preliminary estimates the volume of state capital investments in housing in the oblast will increase 1.8 times during the Seven Year Plan as compared with the preceding seven year period and will cost approximately 2.2 billion rubles, which will be used to construct over two million square meters of housing area.

The widespread construction of homes by the workers themselves

using their personal savings and with the aid of government loans is of importance in satisfying the needs of the population for housing.

It is planned to construct over 1.5 million square meters of privately financed housing in the oblast during the seven year period.

A total of 3.5 million square meters of housing or over 100 thousand flats will be constructed during the seven year period at the expense of the government and private funds.

An increase in the financial incomes of the kolkhozes and in the material welfare of the kolkhoz members will permit a widescale program of housing construction in the rural area. At the same time the problem of shifting the kolkhoz farms from sparsely populated areas to the economic centers consisting of kolkhozes and complex brigades, since at the present time there are over 16 thousand villages in the oblast, many of which consist of less than 10 households, and since this interferes with the proper organization of labor and complicates the management of agricultural production.

The construction of housing is still expensive and of a poor quality here. It is necessary to raise the organization of the building industry in a comprehensive manner, to build dwellings according to new economical plans with small flats, to utilize local, new and progressive building materials in construction work.

It is also necessary to improve the exploitation of the available housing, to properly utilize the large sums allowed by the government for its maintenance, as well as to improve the quality of the services in all of the dwellings, by connecting the houses to the water supply, sewer, and to the heating systems.

Considerable work will be done to expand the communal economy and the planning of cities, workers' settlements and rural populated areas at the expense of the government and of the kolkhozes.

It is planned to construct 198 kilometers of water works in the cities of the oblast, as well as 219 kilometers of sewer lines, 480 kilometers of electric power lines and 15 kilometers of trolley bus lines. The construction of a gas distribution station was begun in the city of Kirov in 1959; it will be placed into operation in 1961. This will lead to the gasification of 19 thousand flats, including 10 thousand flats of the local Soviets, seven thousand in the sovnarkhoz flats and two thousand in the houses of the individual builders. With the introduction of the thermoelectric power plant No. 4 in the city of Kirov the heating networks will be considerably expanded. Social cultural buildings and dwellings will be connected to them.

A fixed reinforced concrete bridge will be placed into service in 1961 across the Vyatka river in the city of Kirov. Considerable work will be done in all the cities in the building of asphalt roads and sidewalks, in the planting of trees, the expansion of the street lighting network and in the improvement of the sanitary conditions of the cities.

The realization of a grandiose plan for the development of the

entire national economy, the equipment of agriculture, industry, transportation as well as the other branches with complex modern equipment, based on the advanced achievements of science, demands the availability of highly skilled and well trained cadres, educated in the spirit of a communist attitude towards labor with a sense of duty towards the community.

An important role in the education and training of cultured, conscientious builders of the communist society armed with the necessary knowledge and labor habits is performed by the Soviet school. It is obligated to prepare comprehensively developed and educated people, who are free of the vestiges of capitalism, who are capable of working and living in the communist manner.

In order to successfully resolve these tasks the Central Committee CPSU developed a program designed to reorganize the school, and to intensify its connections with life and to develop public education in our country still further.

In accordance with the law "Regarding a Consolidation of the School's Relationship to Life and a Further Development of Public Education in the USSR," the Seven Year Plan stipulates the completion of the reorganization of the school network in the Kirovskaya oblast by 1962. In place of the existing 1,442 elementary, 553 seven year and 227 secondary general education schools, by the end of the seven year period the oblast will have 1,450 elementary, 641 eight year and 235 11-year general education schools with industrial training. The number of students attending the general education schools will increase from 357 thousand in 1958 to 389 thousand in 1965.

The number of students enrolled in boarding schools will increase to 25,830 persons by the end of the Seven Year Plan. This will significantly increase the role of the government and of the society in the education of the young.

The workers and rural youth schools must be developed to a considerable degree. At the present time these schools are being attended by 11.7 thousand persons, whereas by the end of the Seven Year Plan the enrollment will rise to 35 thousand persons.

Such a widescale expansion in the school network and an increase in the number of students will require an expanded program of building schools, dormitories and boarding schools.

During the seven year period over 150 million rubles will be invested in the oblast in the construction of schools and 160 million rubles in the building of dormitories for boarding schools, which will result in the construction of over 100 schools accommodating 48 thousand students (83% more than that constructed during the preceding seven year plan), and of boarding schools accommodating 16.8 thousand boarders. In addition to that many schools and boarding schools were constructed by the kolkhozes.

In order to establish conditions which would permit all the Soviet women to fully utilize all of the available citizens' rights and to take an active part in all areas of state, political, economic and cultural life, the Seven Year Plan stipulates a widescale

development of children's institutions--infant nurseries and kindergartens.

It is planned to build and to put into operation facilities in the oblast for 4,879 infants in the nurseries and for 9,620 children in the kindergartens, at the expense of centralized state funds. A large number of pre-school children's institutions will be constructed at the expense of the kolkhoz members, the consumer cooperatives and trade cooperatives. The party and the government have outlined a number of specific measures in order to improve the education of pre-school age children, and for the amalgamation of the nurseries and kindergartens into single pre-school institutions.

Everyone in the Soviet Union enjoys free medical care; they have available to them a large network of polyclinics, women's and children's clinics and hospitals. As a result of the rise in living standards and an improvement in the medical service the general death rate in our country decreased fourfold as compared with the pre-revolutionary period and child mortality decreased some sixfold.

The Seven Year Plan stipulates a great increase in state expenditures associated with the further improvement in the health of the Soviet people. Over 133 million rubles will be spent in the Kirovskaya oblast during the seven year period for the building of hospitals and other public health institutions, as a result of which some 2,500 hospital beds will be put into use, the network of first aid stations will expand, the number of aircraft engaged in emergency medical service will increase along with an increase in the output of drugs and medical equipment. A resort for the treatment of patients with mineral waters and mud baths will be constructed in the village of Nizhneye Ivkino.

A further improvement in the cultural servicing of the population is planned within the seven year period, as well as an expansion in the network of the workers' and kolkhoz clubs, a consolidation of the material basis for libraries, especially in the rural areas: the creation of libraries in the new workers' settlements, the completion of the organization of independent libraries in each rural Soviet and in every large populated point with a population of over one thousand.

It is planned to construct permanent movie theaters in the cities, workers' settlements and large rural populated areas to be financed by government capital investments and loans extended by the State Bank. The movie theatre will be equipped with the latest equipment. Each kolkhoz will have a motion picture installation. The population of small or isolated points will be serviced by mobile motion picture installations on a basis of six to seven populated points for each motion picture installation.

The philharmonic orchestra building will be completed and placed into use in the city of Kirov, which will in the future be used as a musical comedy theater.

The entire Soviet people accepted the Seven Year Plan as their personal affair and undertook its fulfillment with great patriotic enthusiasm.

The workers, kolkhoz members and the intelligentsia of the Kirovskaya oblast, along with the rest of the Soviet people are encompassed by labor enthusiasm. They are filled with determination to complete the Seven Year Plan for the development of the national economy of the oblast ahead of schedule.

There is no doubt that the workers of the Kirovskaya oblast, in response to the appeal of the June 1959 Plenum of the Central Committee CPSU to the workers, kolkhoz members, to the intelligentsia and to all the workers of the Soviet Union, will react with glorious new feats of labor for the glory of our Soviet Homeland.